PROMOTING THE TRANSITION TO PARENTHOOD: THE EFFECTS OF ANTICIPATORY GUIDANCE ON THE TRANSITION TO PARENTHOOD AMONG FIRST TIME PARENTS

MICHAEL KILLORAN ROSS
B.Sc.(Hons.), M.App.Sci.

Submitted for the degree of Ph.D.
University of Glasgow
Faculty of Medicine
February 1999

DECLARATION

I declare this Thesis and the research upon which it is based to be my own work, and testify that it has not been accepted in any previous application for a degree, that all verbatim extracts have been distinguished by quotation marks, and that all sources of information have been specifically acknowledged.

Signed: 

Date: 20 May 1995

The research which forms the basis of this Thesis has been the subject of:

a) published papers (including):

Ross, M.K. (1995) Promoting the transition to parenthood. In Promotion of Mental Health – Vol.4, 1994, ed. Trent, D.R. & Reed, C. pp 273-282. England: Ashgate Publishing Limited.

Ross, M.K. (1998) Ounces of Prevention and Pounds of Cure: Issues in the Promotion of Mental Health. The Bulletin, 26, 10-17.

Ross, M.K. & Stark, C. (1996) Taking steps: Putting mental health promotion on the agenda. Promotion of Mental Health – Vol.5, 1995. ed. Trent, D.R. & Reed, C. pp 331-339. England: Ashgate Publishing Limited.

b) Conference presentations (including):

Fifth Annual European Conference on Mental Health Promotion, London, England - 1995

Sixth Annual European Conference on Mental Health Promotion, London, England - 1996

Seventh Annual European Conference on Mental Health Promotion, Maastricht, The Netherlands - 1997

British Psychological Society - Scottish Branch Annual Conference, Pitlochry, Scotland - 1997

Eighth Annual European Conference on Mental Health Promotion, Birmingham, England - 1998

LIST OF CONTENTS

PAGE

PAGE

PAGE

PAGE

LIST OF TABLES

PAGE

PAGE

PAGE

PAGE

PAGE

LIST OF FIGURES

PAGE

ACKNOWLEDGEMENTS

I would like to acknowledge the advice and support of my Supervisor, Professor Keith Millar. Over the past six years, during which he has moved offices twice, his door(s) have remained open to my frequent requests for assistance. His knowledge, scholarship and patience have been invaluable resources.

I would also like to thank the many colleagues who have assisted in the planning (especially Professor Colin Espie, University of Glasgow; Sr. Jean Rankin, formerly Practice Development Midwife, Ayrshire Central Hospital), the execution (Sr. Ann Porter, Senior Community Midwife, and all the Community Midwives and Community Physiotherapists in Ayr/Prestwick) and the analysis of this project (Professor Adrian Bowman, University of Glasgow). Thanks, also, to Dr. Elizabeth Campbell, University of Glasgow, who acted as Director of Studies for the final eighteen months of this project. I would like to thank my Research Assistants, especially Cora Shiroyama and Barbara McKeen, for their diligent support and my Clerical Assistant, Monica Savory, for her meticulous attention to detail. (Thanks also to Julie Dunnachie for I.T. support!) I would also like to thank Professor Millar's secretary, Anne Crooks, for her consistent helpfulness over the past six years. Finally, I would like to thank my colleagues in CCPS, especially my secretary, Anne Edgar, for her continued good nature throughout this and many other projects, Zena J. Wight (Director) for her remarkable vision in establishing a mental health promotion specialism in a clinical setting and Catherine Kyle (Deputy Director) for her active encouragement and support.

This project has benefited from discussion with friends, especially Dr. Natasha Mauthner, Senior Research Fellow, University of Aberdeen; Dr. Cameron Stark, Consultant in Public Health Medicine, Highland Health Board; Professor Clemens Hosman, Professor of Mental Health Promotion and Prevention of Mental Disorders, Maastricht University/University of Nijmegen, The Netherlands; Dr.

Patricia Mrazek, Mental Health Researcher/Policy Consultant, Bethesda, Maryland and Professor George Albee, Emeritus Professor of Psychology, University of Vermont.

Funding to enable this project was made available by Ayrshire and Arran Health Board and the Community Health Care (NHS) Trust (AAHB) and is gratefully acknowledged. I would like to specifically acknowledge the support of Dr. Drew Walker, Director of Public Health, AAHB; Mhairi MacKenzie, Clinical Effectiveness Co-Ordinator, AAHB, and Dr. Sylvia Morrison, Lead Research and Development Officer, CHCT (AAHB).

I owe a great debt of thanks to the couples who took part in this study, who generously gave of their time to attend classes, complete questionnaires and share their experiences with me. Without them, there would not have been a study.

DEDICATION

To my wife, Mary Keenan Ross, whose generosity of spirit ensures that every life transition is joyous and our children, Carlo (b. 1996) and Guilia (b. 1998), expert tutors in our own transition to parenthood.

SUMMARY

The transition to parenthood (defined as the period of time between conception and the first few months of having a child) is associated with predictable relationship difficulties for first-time parents. Evidence based on research conducted over the past forty years has indicated that new parents experience a decline in relationship satisfaction/quality, that this decline is more marked for new mothers than for new fathers and that maximal relationship dissatisfaction appears to occur within the first three post-natal months. Further, in a significant minority of new parents, there is evidence to indicate the presence of psychological morbidity (defined, principally, in either depressive or anxious symptomatology). In an attempt to promote the psychological well-being of new parents during the transition to parenthood, the "Promoting Parenthood Project" was established in Ayrshire and Arran, Scotland. Models of Anticipatory Guidance (defined by three inter-related activities including the provision of factual information, the anticipation of common psychological reactions to pregnancy, birth and early parenting and the mobilisation of coping resources) were examined in a comparative outcome study based within the context of existing local NHS ante-natal education provision.

A Pilot Study (n=31 couples) was conducted between November, 1994 and March, 1995 and a subsequent Main Study (n=123 couples) was conducted between August, 1995 and August, 1997. All participating couples attended "Parentcraft Classes" (five ante-natal classes attended by both partners on a weekly basis in the third trimester of pregnancy) conducted by Community Midwives/Community Physiotherapists. There were four Treatment Conditions: i) Directed Anticipatory Guidance (two additional ante-natal classes employing a lecture format and an accompanying Workbook written for the study), ii) Non-Directed Anticipatory Guidance (two additional ante-natal classes employing a group discussion format), iii) Workbook Only, and, iv) Control. The dependent

variable was individual/couple parental psychological adjustment during the transition to parenthood (defined as the first six-months following the birth of a first baby) measured by selected standard questionnaires. It was predicted that new parents in the Lecture Condition would achieve significantly greater individual/couple adjustment during the transition to parenthood than new parents in the other Conditions.

A range of standard questionnaires assessing five domains of the transition to parenthood was employed in both studies. The domains under consideration (and representative measures from within each domain) were: Psychological Well-Being (Hospital Anxiety and Depression Scale [Zigmond and Snaith, 1983], Stait-Trait Anxiety Inventory [Spielberger et al, 1970], Edinburgh Post-Natal Depression Scale [Cox et al, 1987]); Relationship Well-Being (Communication Scale [Fournier et al, 1983], Dyadic Adjustment Scale [Spanier, 1976], Marital Roles Inventory [Noller and Callan, 1988]); Pregnancy Well-Being (Support in Pregnancy Questionnaire [McWilliams, 1993], Maternal Adjustment and Maternal Attitudes Questionnaire [Kumar et al, 1984]); Social Support (Family Support Scale [Dunst et al, 1984]) and Coping (Coping Effectiveness Scale [Terry, 1991]; Parenting Stress Index [Abidin, 1990]). Participating couples were randomly assigned to Conditions, assessed at Baseline (approximately 24-26 weeks gestation) and assessed at monthly intervals between months one to four post-partum and, again, at month six post-partum.

The Pilot Study was exploratory and inter-group comparisons were not conducted. However, in the Main Study, the research hypothesis was not supported nor were significant differences among any of the Conditions observed in statistical analysis. Therefore, the null hypothesis could not be rejected. However, significant differences were observed among the entire sample over time which supported earlier findings reported in the transition to parenthood literature. Specifically, findings corroborated earlier evidence suggesting that new parents

experience a statistically significant decline in relationship satisfaction (as defined in this study by decreasing affectional expression) and that maximal relationship dissatisfaction appears to occur within the first three post-natal months. Interestingly, although gender differences were observed on measures of individual psychological well-being, relationship-based gender differences (with women experiencing significantly greater relationship dissatisfaction/greater dissatisfaction with partner's instrumental role performance than men) were not observed.

Reasons for the findings obtained in the study were explored and future research options were discussed. The study raised substantive issues for future transition to parenthood research (including issues in changing cultural understandings of gender and parenthood), mental health promotion theory (including issues in the role of mental health promotion in the context of normative life-events) and practice-based issues for Midwifery and Clinical Psychology in the current NHS. Each of these issues was considered in detail.

PROLOGUE

1. INTRODUCTION

This Thesis and the research on which it is based arose out of a clinical imperative. Asked to consider prevention within an NHS context, I soon became intrigued by the possibility that psycho-social intervention during the ante-natal period could have beneficial effects for new parents in the early post-natal period. As a result, I embarked on a long investigative process and this Thesis is the story of that investigation. The purpose of this Prologue is to chart that story, by way of introduction to the Thesis, through respective Chapters.

In 1991, I accepted a post as a Clinical Psychologist with Ayrshire and Arran Health Board. The remit for that post included both usual clinical responsibilities (the provision of traditional one-to-one patient care in primary care settings) and secondary prevention. As I have recently admitted, both in print and in a Conference presentation, I knew nothing about secondary prevention at that time (Ross, 1998; Key-Note Presentation, Eighth Annual European Conference on Mental Health Promotion, Birmingham, England, September, 1998). I was aware that many aspects of physical health could be improved and that some physical disorders could even be prevented, but like many mental health clinicians, my view of psychological ill-health was considerably more deterministic. However, given an explicit professional imperative in a (on reflection) far-sighted Job Description, I was forced to examine the literature on prevention and promotion in mental health.

It soon became very clear that one of the most lucid approaches to promotion/prevention in mental health was that based on a life transitions perspective (Felner et al, 1983a). From this perspective, it was argued that life changes (marriage, geographic relocation, onset of chronic illness, retirement,

etc.) constituted major events in people's lives which could engender predictable stresses and demand considerable adaptive efforts. Felner et al (1983a) forcibly stated that "...preventive effort aimed at helping individuals understand and master the adaptive challenges posed by marriage, the birth of a child, completing school and other such generally positive events may have enduring effects on the quality of their lives and those around them..." (p.209). Further investigation suggested that, of the many life transitions considered by preventionists, the transition to parenthood had been relatively neglected. From that unpromising beginning, a research idea took shape.

2. AN INTRODUCTION TO THE THESIS

In Chapter One, the early stages of investigation are chronicled. In order to attempt to promote the transition to parenthood, it was clearly essential to understand the nature of that transition. In this opening Chapter, forty years of transition to parenthood research, largely emanating from within a sociological tradition, is reviewed. The conclusions available on the basis of that review were, it appeared at the conclusion of the review, both illuminating and limiting. Psychiatric and psychological understanding, particularly with reference to post-partum affective disorders, was left unexplored.

In Chapter Two, a range of medical, psychiatric and psychological literature was reviewed in order to compliment understanding about the transition to parenthood derived from the sociological literature. Specifically, the nature of post-partum affective disorders and issues in the aetiology of these disorders are considered in this Chapter.

In Chapter Three, previous research aimed at promoting the transition to parenthood and preventing post-natal depression is examined. In order to

establish a useful research protocol, it was clearly necessary to develop a clear comprehension of existing work in this arena. This examination, which includes scrutiny of the broad field of mental health promotion, was pivotal in developing a research protocol. The utility of Anticipatory Guidance in previous work was recognised and this led to Chapter Four, where issues in research design for a psycho-social intervention aimed at promoting well-being during the transition to parenthood could be explored in more detail. Current ante-natal education in the NHS and the important role of Community Midwives, both in the provision of this education for new parents and as research colleagues, is recognised in this Chapter.

Chapter Five chronicles the Pilot Study which was the first step in the "Promoting Parenthood Project", the study that evolved out of the preparatory literature reviews. At that point, it was not entirely clear that prospective parents would consent to have their mental health promoted during the transition to parenthood and, among a range of practical concerns, the very real issues of recruitment and compliance had to be tested. Fortunately, prospective parents were willing to enter the study and, somewhat surprisingly, given the demands on their time, were willing to complete and return a series of questionnaires, at monthly intervals, over a six-month period.

Chapter Six describes the Main Study in detail, presents the results of extensive statistical analysis and, finally, attempts to discern the findings in the study and to place these findings within both theoretical and policy contexts. Finally, in Chapter Seven, which is, in fact, an Epilogue, broad implications of the study, first considered in Chapter Six, are developed in greater detail.

At the completion of this study, the clinical imperative which gave rise to this inquiry in the first place had been met. The reader is invited to examine this inquiry.

CHAPTER ONE

THE TRANSITION TO PARENTHOOD

I. INTRODUCTION

During periods of psycho-social transition, changes in the "inner world" of self-definition and the "outer world" of roles and activities occur (Harris, 1985). Levinson, (1986) states that a transitional period "...terminates the existing life structure and creates the possibility of a new one" (p.7). Parkes (1971) suggests that change during psycho-social transitions is mediated through effects on the "assumptive world" which "...includes our interpretations of the past and our expectations of the future, our plans and prejudices" (p.103). During periods of psycho-social transition, development is predicated by the mastery of successive developmental tasks: "...tasks that arise at or near a certain time in the life of the individual, the successful achievement of which leads to happiness and to success with later tasks - whereas failure leads to unhappiness in the individual, disapproval by society and difficulty in later tasks" (Havighurst, 1972, p.2).

The psycho-social transition to parenthood is defined as: "...the fairly brief period from the beginning of pregnancy through the first months of having a child" (Goldberg, 1988, p.1). This transition is critically important, both as a developmental milestone for parents and as the beginning of infant development. It is associated with psychological, sociological and biological factors operating inter-actively and occupies a pivotal position between individual psychological development and systems (marital dyad/family development) models of behaviour (Goldberg, 1988). The transition to parenthood is a time of developmental challenge in which individual parents and the parental relationship itself face the potential for emotional disequilibrium.

The transition to parenthood has been an area of active research interest for over forty years. Seminal research was conducted by family sociologists.

More recently, developmental and social psychologists have entered the field (Belsky et al, 1986). Over time, there have been three broad areas of research interest, developed across three series of studies. In the first series of studies (circa 1957-1974), "Parenthood as Crisis", disruption in family functioning during the transition to parenthood was explored. In the second series of studies (circa 1960-1990), marital satisfaction/quality during the transition to parenthood was the dominant interest, which was replaced, in the third series of studies (circa 1981- the present), by dominant interest in the determinants of individual variation in marital change during the transition to parenthood. This Chapter will review this body of research literature.

II. PARENTHOOD AS CRISIS

The "Parenthood as Crisis" research relied on the assumption that re-organisation in the family following the birth of a first child constituted a crisis for new parents (Belsky et al, 1986). "Crisis" was defined as "...any sharp or decisive change for which old [behaviour] patterns are inadequate..." (Hill, 1949, p.283). In the first transition to parenthood study, LeMasters (1957) stated that new parents could be compared to veterans of military service. He reported that 83% of his sample (n=46 couples) reported either extensive or severe crisis post-natally. Among this sample, the experience of crisis was related to a number of reported feelings/events during the post-natal period, including chronic fatigue, extensive confinement to the home and the curtailment of social activities, additional housework tasks (washing, ironing, etc.), decline in partners' sexual responsiveness and general dissatisfaction with the parental role. In this retrospective study, unstructured interviews were conducted with parents up to five years following the birth of their first child.

In a follow-up study, Dyer (1963) sought to expand LeMaster's work by investigating specific aspects of the parenthood crisis: a) family organisation preceding birth, b) impact of crisis on the family unit, and, c) recovery from crisis. Dyer reported that 53% of his sample (n=32 couples) experienced

extensive/severe crisis, while the remaining 47% experienced moderate/slight levels of crisis. The degree of crisis was related to four variables: a) the state of the marriage/degree of family organisation before the birth of the baby (with those describing their marriages as "excellent" experiencing less crisis than other parents), b) couple preparation for the birth (with those receiving prior preparation for parenthood experiencing less crisis), c) marital adjustment following the birth (with those rating higher satisfaction experiencing less crisis), and, d) various demographic variables (number of years married, "planned parenthood", and the age of the baby at the time of entry to the study).

Hobbs (1965) attempted to replicate the two earlier studies. A sample of urban white, first-time parents completed a check-list questionnaire devised for this study. (At the time of the study, the mean age of the first–born babies was 9.8 weeks.) In contrast to the earlier studies, there were no reports of either extensive or severe crisis: 86.8% of the sample (n=53 couples) described slight crisis, while 13.2% described moderate crisis. Interestingly, Hobbs noted that "crisis scores" for new fathers and mothers differed significantly (with zero correlation between them). He argued that the measurement of parental experience during the transition to parenthood posed a significant methodological problem for research in the field.

In an attempt to replicate his own work and in order to further explore issues of measurement, Hobbs (1968) conducted a second retrospective study (n=27 couples). (In this study, the mean age of the first-born babies was 23.8 weeks.) Both the check-list questionnaire devised for the earlier study (Hobbs, 1965) and tape-recorded interviews were used as measurement instruments. Results were the same for the checklist scores to those reported in the earlier study: there were no reports of either extensive or severe crisis. However, gender differences were observed, with women reporting significantly greater difficulty in adjusting to parenthood than men. In the interview ratings, roughly 20% of women and 4% of men reported severe crisis. Scores from both indices were correlated to a statistically significant degree. Hobbs (1968)

stated: "...On the basis of the present investigations, it would seem more accurate to view the addition of the first child to the marriage as a period of transition which is somewhat stressful than to conceptualise beginning parenthood as a crisis experience for the majority of new parents" (p. 417).

Russell (1974) attempted to examine both the crises and gratifications inherent in the transition to parenthood. This postal survey (n=296 couples) used a standard measure of marital satisfaction (Locke-Wallace Marital Adjustment Scale; Locke and Wallace, 1959), the check-list questionnaire devised by Hobbs (Hobbs, 1965), and a gratification check-list devised for this study. In common with those findings reported by Hobbs (1968), Russell reported a slight/moderate degree of crisis among participants; gender differences, with women reporting concerns related to the emotional/physical self, and men reporting a wider range of concerns outwith the emotional/physical domain; an association between marital adjustment and crisis, with parents experiencing greater marital adjustment less likely to experience crisis; a relationship between marital adjustment and gratification, again, with parents experiencing higher marital adjustment reporting greater gratification; and a relationship between social class and gratification, with more educated parents experiencing fewer initial gratifications than less educated parents.

Hobbs conducted two further replication studies of his own work, both of which employed the check-list questionnaire used in the inital study (Hobbs,1965). In the first, Hobbs and Cole (1976) reported nearly identical findings to the initial study, with 75% of the sample (n=120 couples) describing none/slight crisis and 22% reporting moderate crisis. (In this study, the mean age of the first-born babies was 25.9 weeks.) As first reported in Hobbs (1968), Hobbs and Cole (1976) reported that mothers described significantly greater difficulty in adjusting to parenthood than fathers.

In the second study, Hobbs and Wimbush (1977) examined the transition to parenthood among an urban African American population. The authors reported that 79% of the sample (n=52 couples) experienced slight difficulty,

while 21% experienced moderate difficulty. As first reported in Hobbs (1968) and Hobbs and Cole (1976), a significantly different relationship between mothers'/fathers' adjustment to parenthood was found in this study: women reported greater adjustment difficulty than men.

The first series of research studies on the transition to parenthood clearly led to polarised conclusions. However, both sets of conclusions were based on studies that were conceptually and methodologically flawed: measurement was generally neither standardised nor validated, sample size was small and generally unrepresentative and, until the study by Russell (1974), the concept of crisis served to obviate the positive gratifications associated with child-bearing. It must also be noted that these studies were retrospective and, thus, subject to significant recall/attribution bias. Similarly, there were significant discrepancies in the ages of the first-born children when parents were initially assessed (from ten weeks [Hobbs, 1965] to five years [LeMasters, 1957]).

In spite of these criticisms, the importance of this series of studies must be acknowledged. For the first time in scientific literature, parenthood was characterised as, at least to some degree, traumatic and differing gender perspectives on parenthood were identified. Whether or not the transition to parenthood could be considered a crisis, it was clear, on the basis of these exploratory studies, that parenthood was associated with predictable and often negative change for new parents and that new mothers reported experiencing greater negative impact in new parenting than new fathers. In the next series of studies, the investigation of crisis during the transition to parenthood was replaced by investigations into marital satisfaction and marital quality.

III. MARITAL QUALITY/MARITAL SATISFACTION

In parallel to the "crisis" literature, there was extensive development in research on marital stability and happiness (Hicks and Platt, 1970). In this research, the family life cycle (commonly classified according to eight stages

as identified by the developmental level of the oldest child, the presence of children in the family and retirement) was often used as an explanatory variable (Burgess and Locke, 1945). The focus of this work was not specifically on the transition to parenthood but was, rather, on patterns of change in marital interaction over time. There appeared to be a point of intersection, however, when Hicks and Platt (1970) noted that "...the single most surprising finding to emerge from research is that children detract from, rather than contribute to marital happiness" (p. 569).

Lewis and Spanier (1979) defined marital quality as: "...the subjective evaluation of a married couple's relationship on a number of dimensions and evaluations (marital adjustment, communication, happiness, integration and satisfaction)" (p.269). The marital quality literature can be usefully considered from two sources: cross-sectional studies and longitudinal studies.

1. CROSS-SECTIONAL STUDIES

In two major cross-sectional studies examining marital quality across the family life cycle, contradictory results were obtained. An early study (Blood and Wolfe, 1960) suggested a general decline in marital quality over time. This finding was later disputed in a study by Rollins and Feldman (1970), in which it was suggested that a U-shaped curve most adequately accounted for the data (the curvilinearity hypothesis). According to the curvilinearity hypothesis, a decline in marital quality over the early stages of the family life cycle (including the transition to parenthood) was followed by an increase in marital quality over the later stages (the post-parental stage). In their study, Rollins and Feldman (1970) noted that marital satisfaction differed between women and men, with women describing decreasing satisfaction during childbearing/child-rearing stages, and men describing decreasing satisfaction when anticipating retirement.

Rollins and Cannon (1974) sought to examine the contradictions in the two major studies in a third study. In this study, results supported the curvilinear hypothesis: high marital satisfaction was reported among newly married couples, with a decline in satisfaction reported after the birth of a first child, a subsequent levelling off and a later increase in satisfaction through the post-parental and retirement stages. The study failed to find any differences in marital satisfaction between fathers/mothers at any stage.

Spanier et al (1975) argued that the earlier studies (Blood and Wolfe, 1960; Rollins and Feldman, 1970; Rollins and Cannon, 1974) relied on visual inspection of data in the detection of non-linear trends and, hence, failed to test for significant departure from linearity. They conducted co-ordinated studies in three American centres (Iowa, Ohio and Georgia), and examined the relationship between the Locke-Wallace Short Marital Adjustment Scale (Locke and Wallace, 1959) and the stage of the family life cycle. Their findings indicated significant curvilinearity in only one sample (Ohio) and they concluded that the issue of curvilinearity could not be settled. However, they stated "...it is seemingly appropriate to conclude that couples report lower marital adjustment scores following the birth of their first child, and continuing through the early childhood years" (p.271).

As noted by Spanier et al (1975), and Cowan and Cowan (1988), there are significant difficulties in interpreting cross-sectional data. Among these are cohort-related effects which may have served to under-estimate the declines in marital quality observed during the transition to parenthood. In this series of studies (conducted from 1970-1980), couples in the early stages of marriage, who had married and been part of a cohort exposed to divorce rates reported as the highest in American history, were contrasted with couples in later stages of marriage, who had married and been part of a cohort exposed to significantly less divorce. Further, it has been noted that the majority of divorces occur before the seventh year of marriage when couples are often confronting concurrent difficulties associated with early marital adjustment and the transition to parenthood (Spanier et al, 1975). Conceivably, the least

satisfied couples among those in the early stages of marriage (first seven years) were already divorced and, therefore, not included in samples of stable marriages.

2. LONGITUDINAL STUDIES

Longitudinal studies essentially supported the trends observed in the cross-sectional data. In eleven longitudinal studies where marital satisfaction was measured both before and subsequent to birth, a significant decline in marital satisfaction, for a majority of couples, has been reported (Feldman, 1971; Shereshefsky and Yarrow, 1974; Miller and Sollie, 1980; Grossman et al, 1980; Waldron and Routh, 1981; Belsky et al, 1983; Feldman and Nash, 1984; McHale and Huston, 1985; Belsky et al, 1985 (a); Cowan et al, 1985; Wright et al, 1986). In two further studies, non-significant declines in marital satisfaction have been observed (Ryder, 1973; White and Booth, 1985). Marital satisfaction has been measured in observer ratings (Shereshefsky and Yarrow, 1974), in questionnaires created by researchers for specific studies (Feldman, 1971; Miller and Sollie, 1980; Feldman and Nash, 1984; McHale and Huston, 1985), or through standard measures like the Locke-Wallace Marital Adjustment Scale (Locke and Wallace, 1959) or the Dyadic Adjustment Scale (DAS) (Spanier, 1976) (Belsky et al, 1983; Belsky et al, 1985 (a); Cowan et al, 1985).

Using pre-baby/post-baby questionnaire data created for their study (measures of personal well-being, personal stress and marital stress), Miller and Sollie (1980) suggested that perceived personal and marital stress were more apparent when babies were eight months old than when babies were one month old. Personal stress increased for both parents (n=120 couples) over the transition to parenthood and women reported greater marital stress than men. The authors suggested that this pattern of increasing marital stress in the post-natal period (between one month and eight months post-natal) was suggestive of a "baby honeymoon" in early parenting.

Belsky et al (1983), using both standard questionnaire data (administered during the last trimester of pregnancy and at three months/nine months post-natal) and observational data (administered at one month/three months/nine months post-natal) to investigate marital change following the birth of a first baby or later-born baby (n=72 couples), reported that the transition to parenthood or the addition of more children to the family "...results in modest but significant changes in the marital relationship which most would regard as somewhat unfavourable" (p.575). Their findings suggested that the effects of a new baby on the marital relationship are most obvious in the early post-natal months and, in comparing their data to that of Miller and Sollie (1980), Belsky et al (1983) suggested that the "baby honeymoon" extended to the third post-natal month. They also noted that the marital adjustment of wives was apparently more sensitive to the addition of a new baby than that of husbands, and that the declines in marital quality noted during the transition to parenthood continued with the addition of more children to the family. Finally, they stated that although the mean scores on measures of marital quality changed significantly, the rank orders of scores remained unchanged. (A finding essentially supported in work by Lewis, 1988.) As stated by Belsky et al (1983): "..even though marital quality may decrease across the transition to parenthood, those individuals making the most positive (or negative) evaluations of their marriages before the baby arrives may be the same parents who make the most positive (or negative) evaluations in the infant's first year of life" (p.568).

In a subsequent study restricted to first-time parents (n=67 couples), Belsky et al (1985a) sought to replicate their earlier findings. Once again, using both standard questionnaires and observational measures (administered during the last trimester of pregnancy and at one month/three months/nine months post-partum), they reported a very similar set of findings to those reported in the earlier study (Belsky et al, 1983): modest but statistically significant negative changes in the marital relationship, primarily observed between the last

trimester of pregnancy and three months postpartum; greater negative change for wives than husbands; and consistent rank ordering among individuals.

There were several conclusions which appeared to be available on the basis of the longitudinal data. These studies consistently reported a decline in overall marital quality during the transition to parenthood (observed in modest statistical decreases) and the decline in marital quality appeared to be greater for women than for men. Further, it appeared that the observed mean changes in marital quality were stable, in that rank ordering of scores among spouses was maintained pre/post-natally, to a significant degree.

Although the longitudinal studies represented a methodological refinement over the earlier cross-sectional studies, a number of difficulties in interpreting these data remained unresolved. There continued to be a range of measurement indices employed across studies (which effectively limited comparisons) and the timing of measurements in the post-natal period also differed considerably (ranging from first post-natal assessments at one month to first post-natal assessments at 8/9 months). Further, although the research had increasingly focused on changes in the marital relationship, correlates like individual psychological well-being had been largely ignored.

3. CROSS-CULTURAL COMPARISONS IN THE TRANSITION TO PARENTHOOD

A frequent criticism of the transition to parenthood literature is that very little of the research is cross-cultural (Worthington and Buston, 1986). The studies reviewed here have been exclusively American in origin and have generally considered the transition to parenthood among white, urban middle-class maried couples.

A notable exception was the study by Hobbs and Wimbush (1977) described earlier, in which the transition to parenthood among African Americans was considered. In this study, patterns of marital dissatisfaction during the post-

partum period were similar to those reported in other studies with white first-time parents. More recently, in a longitudinal study, Crohan (1996) directly compared marital quality between white and African American first-time parents (n=65 couples) and childless parents (n=106 couples) and reported similar findings for both parenting samples (lower marital happiness and increasing marital conflicts in the post-partum period).

In a British longitudinal study, Elliott et al (1985), with a sample of primiparae (n=49) and multiparae women (n=79), reported that for the majority of women, the birth of a child was not associated with crisis. They also suggested that satisfactory marital relationships appeared to protect against post-natal depression. Moss et al (1986), with another British cohort, reported similar findings but argued that, for approximately 10% of their sample (n=96 women), "...the transition to parenthood appeared to have serious and adverse consequences for their marriages, which persisted certainly to twelve months after the birth" (p.65).

In a more recent British study, Dragonas et al (1992) compared the transition to fatherhood between first-time fathers from Greece (n=198) and British first-time fathers (n=142). Although some differences in the samples were observed (more British fathers attended the delivery; British fathers assumed more household duties in the postpartum period; Greek fathers reported significantly higher malaise during their partners' pregnancies) there were "...no differences in emotional well-being between Greek and British fathers. Reactions to fatherhood and enjoyment of the child were similar for the two cultures..."(p.1).

Levy-Shiff, (1994) examined the transition to parenthood in a longitudinal study among two sub-samples (n=102 couples) of Israeli first-time parents: Oriental Jews (originating from Asian/North African countries) and Western Jews (originating from Europe/North America). Participants were asked to complete standard measures in the third trimester of pregnancy and again at 8/9 months postpartum. In addition, direct observations of mother/baby interaction and mother/father/baby interaction were carried out at 8/9 months postpartum. In

common with the American and British studies, a decline in marital adjustment was noted for both men and women and the decline was more marked for women. Women from non-western backgrounds reported a smaller decline in post-natal marital adjustment than women from western backgrounds. Levy-Shiff (1994) suggested that this finding may have been a function of some reticence among women from non-western backgrounds to admit to marital dissatisfaction.

In summary, then, there does appear to be some preliminary evidence to suggest that the decline in marital adjustment during the transition to parenthood is ubiquitous across a variety of cultures.

1. "BLAMING THE BABY"

The automatic assumption that a child is the only variable in changing patterns of marital quality has been described by Cowan and Cowan (1988) as "...blaming the baby". It is necessary to consider the possibility that marital quality simply erodes over time and is unrelated to the presence or absence of children. In spite of some divergence of research opinion, the findings on the effects of children on marital quality appear to be relatively consistent. There is evidence to suggest that: a) when directly compared, childless couples are generally happier with their marriages than parenting couples (Renne, 1970; Feldman, 1971; Campbell et al, 1976; Glenn and Weaver, 1978; Houseknecht, 1979), b) parenting couples, across the life cycle, report lower marital satisfaction than couples who have not yet had children, or whose children have left home (Glenn, 1975; Spanier et al, 1975); c) marital quality appears to be related inversely to number of children (Miller, 1976; Belsky et al, 1983; Abbott and Brady, 1985). A sample of this research, beginning with cross-sectional studies, will be considered below.

Renne (1970) reported that those respondents currently raising children were more likely to be dissatisfied with their relationships than those who had never

had children or whose children were not living with them. However, Renne (1970) also noted that the number of children in the family did not appear to have any consistent effect on ratings of satisfaction. In this survey (n=5,163 couples), marital satisfaction was measured by six questions on attitudes to marriage directed at respondents who were currently married.

Luckey and Bain (1970) investigated marital satisfaction among a sample of married couples (n=72) who had previously been identified as "satisfactorily" married or "unsatisfactorily" married. Among the unsatisfactorily married sample, 63% listed children as the major satisfaction in their marriages and listed no other satisfaction in common. In contrast, only 4% of couples in the satisfactorily married sample listed children as their only satisfaction. Companionship was mutually agreed by both partners as one of the greatest satisfactions of marriage in 68% of the satisfactorily married sample; among couples in the unsatisfactorily married sample, only 18% reached this conclusion. In this study, neither the number of children in the family nor the spacing intervals between children appeared to have any consistent effect on marital satisfaction. Luckey and Bain (1970) concluded that couples with a low degree of satisfaction may remain married primarily because of the presence of the children. However, Cherlin (1977), in a large-scale longitudinal survey, (n=2,126 women) reported data suggesting that children were a deterrent to separation and divorce only when they were of pre-school age.

Houseknecht (1979), in a study comparing women who were married and voluntarily childless (n=50) with married mothers (n=50), found that the childless group scored higher on overall marital adjustment on the Dyadic Adjustment Scale (Spanier, 1976) than mothers. However, Houseknecht (1979) noted that the differences between the groups were small in magnitude and argued that education, employment and religion, or some combination of these factors, might be confounding variables. Abbott and Brody (1985), in examining marital adjustment (n=210 women) in wives without children and wives with children, reported highest marital satisfaction among wives without children. (Again, marital adjustment was measured on the Dyadic Adjustment

Scale [Spanier, 1976]). Interestingly, Abbott and Brody (1985) noted that decreased levels of marital adjustment were specific to wives with two male children. For wives with female children, particularly female infants, there were no significant differences in marital adjustment when compared to wives without children.

In contrast to other findings among the cross-sectional studies described earlier, both White and Booth (1985) and McHale and Huston (1985), in longitudinal studies comparing samples of married couples with children and childless married couples, argued that decline in marital quality was not related to parenthood, but, rather, was a function of time. White and Booth (1985) conducted telephone interviews with participants who had become parents (n=107) and couples who had not become parents (n=113) between 1980 and 1983. The authors devised Likert-scale measures of marital happiness, marital interaction, traditionalism in the division of labour, frequency of disagreements and quarrels and the occurrence of physical violence. Although they found a greater decline in marital happiness and interaction and an increase in marital problems and disagreements among the parent sample, these differences between the samples did not approach significance.

McHale and Huston (1985) compared couples who became parents (n=28) during the first year of marriage with couples who remained childless (n=78) during this period. The authors employed face-to-face interviews to assess subjective evaluations by each spouse about the relationship (satisfaction with positive/negative inter-personal events in the marriage, feelings of love for spouse, level of satisfaction with marriage) and telephone interviews to assess behavioural aspects of the relationship (household task/childcare activities, leisure activities, husband-wife interactions, conversations). The results suggested that marital satisfaction declined over the time-period for both samples.

It is interesting to speculate on the differences obtained in the cross-sectional and longitudinal studies. Unfortunately, methodological issues in the White

and Booth (1985) and McHale and Huston (1985) studies cloud the interpretation of these findings. Both these sets of researchers relied on telephone interviews in data collection. It is conceivable that this method was unreliable, in that it may have been insensitive to changes in marriage occurring during the transition to parenthood. (This assertion is supported by findings of significant changes in marital satisfaction during the transition to parenthood revealed with extensive face-to-face interviews, employed in the longitudinal study by Cowan et al [1985] reported below.)

In the White and Booth (1985) and McHale and Huston (1985) studies, the ages of the children varied at the time of the parental interviews and changes in marital satisfaction were not, therefore, linked to the age of the child (as has been the case in studies by Belsky et al, 1983; Belsky et al, 1985[a] and Cowan et al, 1985). Further, for McHale and Huston (1985), the population of new parents (n=28 couples) was very small. It is also possible, in this study, that the transition to parenthood was confounded by the transition to marriage. Finally, White and Booth (1985) questioned individual partners as opposed to couples and it is possible that the ratings of marital satisfaction among couples would differ from the assessment offered by individual partners.

In an extensive longitudinal study, with a total of 96 couples (72 couples expecting a first child/24 couples undecided about having children), Cowan et al (1985) investigated changes in the marital relationship over a twenty-one month period with a range of qualitative and quantitative measurements (administered pre-natal/six months/eighteen months post-natal). They investigated marital change over five domains of family life: individual parent's sense of self (self-esteem and adaptation to the parenting role), marital interaction (roles/communication), each parent/child relationship, the three generational perspective (grandparent/parent/child), and the balance between life stresses and available social support from extra-family sources (work/school/friendship networks).

In describing their results, Cowan et al (1985) reported that in four out of five of the domains studied (self, marital interaction, parent-child relationship and relationships outside the family), new parents demonstrated more negative change than childless couples. Further, they noted that gender differences were apparent in these observed changes (with men showing fewer changes than women over time). Cowan et al (1985) argued that an interaction between gender differences and increasing conflict, produced as a result of changes in the relationship, contributed to reduced marital satisfaction among the new parents. The authors noted: "...this study strongly indicated that over and above the vicissitudes of relationship over time, becoming a family is accompanied by change, much of it negative, in various domains of family life and in men's and women's overall satisfaction with their marriage..." (p. 470).

IV. EXPLAINING MARITAL DISSATISFACTION DURING THE TRANSITION TO PARENTHOOD

While earlier research documented the average experience of couples and the extent of average change in marital relationships during the transition to parenthood, more recent research studies have focused on individual variation and the determinants of individual variation in marital change during this period. Belsky (1985) has argued that this re-focusing of interest is attributable to increasing involvement in this area of research by psychologically-oriented researchers. In this range of studies, the interaction between personality factors and/or cognitive factors (including expectancy confirmation processes) and role arrangements/role adjustments within the new family (including the work-family interface) during the transition to parenthood has been of particular interest (Waldron and Routh, 1981; Basoff, 1984; Belsky, 1985; Belsky et al, 1985[b]; Belsky et al, 1986; Lewis and Cooper, 1988; Ruble et al, 1988; Brannen and Moss, 1991; Terry et al, 1991; Hackel and Ruble, 1992; Levy-Shiff, 1994).

In this research, a starting point has been the observation that instrumental roles become more traditional during the transition to parenthood, with new fathers adopting more traditionally male responsibilities (care of the exterior of the home, responsibility for family finances, etc.) and women assuming more traditionally female responsibilities (housekeeping, laundry, etc.). For women, this division of labour includes greater responsibility for childcare, and, conceivably, an inequitable proportion of role assignments (Feldman et al, 1981; LaRossa and LaRossa, 1981; Garrett, 1983). This trend appears to exist irrespective of women's employment status or educational attainment (Hoffman, 1978; Ruble et al, 1988), division of labour prior to the transition to parenthood or sex role ideology (Stafford et al, 1977; Cowan et al, 1978; Cowan et al, 1985; Hackel and Ruble, 1992; Sanchez and Thomson, 1997). In fact, Sanchez and Thomson (1997) have emphatically stated "...it bears repeating that the modal division of labour in contemporary marriage is more gender-traditional than egalitarian, especially after the initiation of parenthood" (p.767).

In addition to changes in instrumental role arrangements, there is evidence to suggest that socio-emotional role patterns change during the transition to parenthood. Companionate activities (amount of leisure/recreational time available, amount of sexual activity) decrease pre/post-natally and these changes are often perceived by new parents as negative (Belsky et al, 1983; Harriman, 1983; Feldman and Nash, 1984; Elliott and Watson, 1985). Further, increases in conflict and decreases in the degree to which partners behave in positive ways to each other have also been reported (Cowan et al, 1978; Vincent et al, 1980; Belsky et al, 1983; Feldman and Nash, 1984).

Waldron and Routh, (1981) examined the transition to parenthood as a function of sex-typing. As suggested by Belsky et al, (1986), "sex typing" or "sex-typed personalities" is a "...generic phrase designating a person's inclination to think in ways consistent with traditional sex roles and sex stereotypes" (p.518) and encompasses several intercorrelated constructs (sex role attitudes, role preferences, sex stereotyping) which "...account for

tendencies of individuals to behave in ways that fulfil or violate sex role expectations and stereotypes" (p.518).

Based on earlier work by Bem (1975), and Bem et al (1976), Waldron and Routh (1981) hypothesised that couples in which one or both of the spouses were androgynous (implying a combination of masculine and feminine attitudes/behaviours) or feminine sex-typed would be more nurturant toward new babies and would, as a result, experience smaller decreases in marital satisfaction. Participants (n=46 couples) were assessed using the Locke-Wallace Marital Adjustment Scale (Locke and Wallace, 1959) and the Bem Sex Role Inventory (Bem, 1975) during the last trimester of pregnancy and six weeks post-natally. Although it was reported that wives' ratings of marital satisfaction significantly decreased following birth (in keeping with previous research), there was no correlation observed between sex-role characteristics and marital satisfaction. The study, however, did not report the number of spouses identified as androgynous/feminine sex-typed and, given the small sample size, the absence of effect is not surprising.

Belsky et al (1986) argued that the findings by Waldron and Routh (1981) could not be taken as evidence that sex-typing had no role in the adjustment process during the transition to parenthood. Rather, Belsky et al (1986) argued that the interaction between sex-typing and the change toward a more traditional division of labour should be examined. With a sample of 61 wives, they hypothesised that those women whose sex-typed personality was less traditional and whose household division of labour became more traditional during the post-natal period would experience the greatest marital change. Using interviews and standard questionnaire indices administered at two time points (third trimester of pregnancy and three months post-natal), the results supported the hypothesis: women who scored highly on masculine/instrumental traits reported the most marked decline in marital quality (as defined in affectional aspects of the marriage). The authors suggested a "role-overload" theory to account for their findings, such that the demands of childcare already placed a significant demand on these less-

traditional mothers, which was accentuated by increased demands as homemaker. The authors stated: "Their dissatisfaction with their unexpected and inconsistent role behaviours may have led them to feel less well about themselves and other aspects of their life, including their marital relationship and their spouse." (p.522).

Bassoff (1984), attempted to explore the relationship between sex-role characteristics and mental health in new mothers. Participants (n=195 women) were asked to complete the Bem Sex-Role Inventory (Bem, 1975) and the SCL-90 (Derogatis et al, 1975), a self-report inventory of psychopathology. Results suggested that mothers identified as androgynous or masculine demonstrated less psychological distress than mothers identified as feminine or "undifferentiated" (defined by scores falling below the median on both the masculine and feminine scales). While noting that masculine mothers in this study appeared to be better adjusted than feminine mothers in the post-partum period, Bassoff cautioned that both the relatively narrow definition of "femininity" defined by the Bem Sex-Role Inventory, and the relatively selective measurement of mental health in the SCL-90 served to obfuscate, rather than elucidate, the relationship between these two complex constructs. Further, it must also be noted that this study was cross-sectional, with measurement taken in the post-partum period only. The relationship between sex-typing and family change during the transition to parenthood was, thus, unclear.

Belsky (1985) examined the role of cognitive expectations during the transition to parenthood. He hypothesised that those individuals who, during the last trimester of pregnancy, were overly optimistic about the transition to parenthood, either in over-anticipating positive events or in underestimating negative events, would, as a function of "violated expectations", experience greater stress and greater declines in marital quality than prospective parents with less optimism. In this study (n=61 couples), participants were assessed at three time periods (third trimester of pregnancy, three months/nine-months post-partum) across two domains of measurement (pre-natal expectations/post-natal reports of actual events and marital relationship). In

support of the hypothesis, Belsky (1985) reported that where pre-natal expectations were incongruent with post-natal experiences, marital relations were adversely affected. This finding was particularly apparent for wives, especially between the third trimester of pregnancy and the third post-natal month, when, arguably, the greatest changes in women's lifestyles (remaining at home prior to returning to work, major responsibility for childcare, etc.) occur. Violated expectations appeared to have less significant effect on marital change from three to nine months postpartum.

A limitation in the Belsky (1985) study was that one discrepancy score (reflecting questions on marital conflict, sense of self, family relations, shared infant care giving) was obtained per participant. To evaluate violated expectations regarding instrumental role arrangements (childcare and housekeeping tasks), Ruble et al (1988) conducted a combined cross-sectional (n=670 women) and longitudinal (n=48 women) analysis. They hypothesised that discrepancies between expectations regarding the division of labour made during pregnancy and actual experience of the division of labour in the postpartum period would be associated with greater dissatisfactions within the marriage. The results supported the hypothesis: women reported less positive feelings towards their husbands during the postpartum period than during the pregnancy; postpartum women reported a more inequitable division of labour than pregnant women either reported or expected and the discrepancies were most noticeably marked for childcare. In this study, however, dissatisfied women reported negative feelings about their husband's involvement with childcare and the effects of the infant on the relationship only. Their negative feelings were not related to more general feelings of closeness experienced toward their husbands.

Somewhat in contrast, in a study by Terry et al (1991) (n=59 couples), a decline in "affectional expression" (as a general measure of marital quality) was reported by both sexes in the postpartum period. However, the general decline in women's affectional expression was evident only for those new mothers who were dissatisfied with their partner's role performance. In fact, the authors

stated, "...the perception that one's spouse is contributing fairly to the performance of household tasks may be associated with an increase in female levels of marital quality across the transition to parenthood" (p.131). Levy-Shiff (1994) reported a finding which was similar to that of Terry et al (1991), and which was also the obverse of the finding by Ruble et al (1988). In this study (n=102 couples), Levy-Shiff (1994) noted that a higher level of paternal infant care-giving was associated with a more limited decline in marital satisfaction. In exploring this finding, it was argued that "...women see men's involvement with the children as a loving and caring act towards the women themselves" (p. 598).

Hackel and Ruble (1992) examined the degree of flexibility of expectations as a moderating factor in marital satisfaction during the transition to parenthood in a longitudinal study (n=50 couples). Specifically, they hypothesised that new mothers with "...more rigid, committed expectations, either because they are held strongly or because they are personally important, would be more invested in confirming them and thus should experience greater difficulty when this proves impossible" (p.945). Their findings supported this view and they stated that "...negative change in marital satisfaction was most closely associated with actually doing proportionally more than expected (or with expecting to do proportionally less than was actually done) for those groups of women who were predicted to be the most committed to the expectation - high discussion, high adaptability and non-traditional gender personality" (p.954).

Belsky et al (1985b), Lewis and Cooper (1988) and Brannen and Moss (1991) have examined the work-family interface during the transition to parenthood. Not surprisingly, Belsky et al (1985b) reported that spouses experiencing high levels of work-family interference pre-natally and at three months post-natally reported increases in marital conflict. Lewis and Cooper (1988) reported a similar finding but suggested that work-family interference was more commonly experienced by new mothers, reflecting the "...effects of societal consensus regarding the primacy of maternal responsibilities" (p.484). This observation was reflected by Brannen and Moss (1991) who stated "...dominant ideologies

about motherhood emphasise women's primary responsibility for children and remain highly ambivalent about women with very young children having full-time jobs" (p.251).

This recent series of studies explaining marital dissatisfaction during the transition to parenthood are important for two reasons. First, it must be recognised that many of the primary references in the field (Belsky et al, 1983; Belsky et al, 1985[a]; Cowan et al, 1978; Cowan et al, 1985) are, as we approach the millennium, somewhat dated. Studies published in the mid-eighties (or earlier) no doubt reflect fieldwork undertaken at an even earlier time. Social trends which were evolving in the mid/late-seventies and which have produced significant changes in gender roles and employment patterns for both men and women have, potentially, affected the contemporary transition to parenthood experience (Brannen and Moss, 1991). More recent studies in this current series (Terry et al, 1991; Hackel and Ruble, 1992; Levy-Shiff, 1994) have provided an opportunity to consider the transition to parenthood within a more contemporary social context. Secondly, this series of studies have defined cognitive determinants in parental dissatisfaction during the transition with greater clarity than was available in the earlier work. However, it should also be noted that concepts like "traditional" gender personality and "masculine/feminine identities", on which this work is based, are both value-laden and somewhat subjective categories. Therefore, and as noted by Bassoff (1984), conclusions based on the use of these concepts must be carefully considered.

V. CONCLUSIONS

The history of the transition to parenthood research reveals a constant reformulation of both research questions and methodology in the pursuit of definitive data. As with other fields of research endeavour, charting this history of enquiry indicates clearly the progression of ideas and concepts culminating in current views. On the basis of the literature reviewed here, and within the

limitations of that research (including the fact that research has been almost exclusively based on the experiences of married couples as first-time parents) several basic conclusions appear warranted: change and re-organisation is a constant feature of new parents' lives and is associated with a variety of strains and gratifications; new parents experience a modest, though statistically significant decline in relationship quality (broadly defined as relationship satisfaction, adjustment, etc.) and this feature of the transition to parenthood appears ubiquitous in a variety of societies in which research has been undertaken. Further, the decline in relationship quality is more marked for women than for men, may be related to the traditionalising of instrumental roles during the post-natal period (especially for women who are also working outside the home) and may be somewhat moderated by paternal infant care. Finally, and in apparent support for the adage that while babies do not ruin good relationships, they do not improve poor ones, rank ordering of individual differences in relationship quality/adjustment is stable when examined pre/post-natally (Belsky et al, 1985[a]). The period of time during the post-natal period in which family re-organisation takes place is unclear, however, maximal relationship dissatisfaction appears to occur within the first three post-natal months (Belsky et al, 1985[a]).

The determinants for relationship disequilibrium during the transition to parenthood appear to be embedded within both individual and cultural expectations of the parenthood experience. It is, therefore, theoretically possible that the relationship difficulties encountered by new parents during the transition to parenthood could be modified by appropriate ante-natal support and education, a view endorsed both by researchers like Tomlinson (1987). Belsky and Pensky, (1988) and Terry et al (1991), and new parents themselves (Combes and Schonveld, 1992). Within the National Health Service, "Parentcraft Classes" focus almost exclusively on the physical aspects of the birth process while psycho-social aspects of parenting and couple interaction during the transition to parenthood are virtually ignored (Ford, 1994). Unfortunately, little research has been done to explore the type of preparation

which would be most suitable for new parents during this developmental transition (Ross, 1995).

The transition to parenthood, as a field of academic enquiry, has largely been defined and explored within a sociological framework. A weakness in this analysis has been that research based within medical models of enquiry has been excluded in shaping a multi-factorial understanding of this transition. The fact that the birth of a child may be accompanied by psychosis or depression in a small proportion of families suggests that the incidence and prevalence of psychological/psychiatric morbidity must be examined (O'Hara and Zekoski, 1988). Chapter Two will, therefore, consider these issues. What, if anything, can psychology/psychiatry add, from their own observations of the transition to parenthood, to the sociological findings?

CHAPTER TWO

PSYCHOLOGICAL WELL-BEING DURING THE TRANSITION TO PARENTHOOD

1. INTRODUCTION

The transition to parenthood literature was, historically, dominated by sociological perspectives, with interest focussed on changes in marital relationships following major restructuring in the family system (LeMasters, 1957). The specific interests of family sociologists in the change from dyad to triad and the creation of new roles within the family (i.e., mother/father) have, more recently, been complimented by perspectives from developmental psychologists (Belsky, 1985). Interestingly, however, perspectives from clinical psychologists and psychiatrists, suggesting that women, and possibly men, are at risk from affective disorders during the transition to parenthood have remained marginalised and largely ignored within the wider field (Cowan and Cowan, 1988). Apart from recent work by Hock et al (1995), there have been few attempts to consider variables in relationship change and psychological well-being in multivariate research designs.

There is evidence to suggest that women experience a range of mood changes during the transition to parenthood. (O'Hara and Zekoski, 1988). For possibly 20%-30% of women, there is little change in a prevailing, relatively positive mood state from pregnancy through the post-natal period. For a further 40%-50% of women, relatively brief periods of dysphoria (maternity blues), lasting from a few days to a week occur (Pitt, 1968). More substantial mood disturbances, associated with some degree of impairment in functioning and persisting for a week or more (post-natal depression) occur in, approximately, a further 8-20% of women (O'Hara and Zekoski, 1988). In-patient or out-patient treatment may be required for a small proportion of women (3%-7%)

who are more severely depressed. For a minority of women (0.1%-0.2%), psychotic symptoms (puerperal psychosis) will require intensive psychiatric care (Kumar and Robson, 1984).

Although it has been stated that fatherhood must be regarded as a significant life-event with a potential for adjustment/maladjustment, there appear to have been few systematic studies of psychological well-being among fathers (Fedele et al, 1988; Henderson and Brouse, 1991; Mackenzie, unpublished manuscript). In some studies, the psychological well-being of fathers has been observed only in relation to their roles as partners to women experiencing postnatal psychiatric disturbance (Harvey and McGrath, 1988; Lovestone and Kumar, 1993). However, in other studies, in which the psychological well-being of fathers has been the central focus of research, the presence of affective disorders has been reported (Dewi-Rees and Lutkin, 1971; Atkinson and Rickel, 1984; Raskin et al, 1990; Deater-Deckard et al, 1998).

There is an extensive research literature, largely emanating from the medical model, examining pre/postpartum affective disorders among women and, to a significantly lesser degree, men (Hopkins et al, 1984; O'Hara and Zekoski, 1988; Lee, 1997). The literature has produced equivocal and often contradictory findings (O'Hara and Zekoski, 1988; Lee, 1997). The medical model itself, as a vehicle for understanding women's psychological health during the transition to parenthood has been criticised (Jebali, 1993; Mauthner, 1993; Lee, 1997; Nicolson, 1998). As stated by Lee (1997) "...Cultural assumptions about motherhood create an artificial dichotomy between the normal, happy mother and the pathological experience of postpartum depression" (p.93).

The purpose of this Chapter is to compliment, from a clinical perspective, the understanding offered by sociological research on the transition to parenthood. This Chapter will review findings from major representative research on substantive issues in postpartum affective disorders, issues in the classification

of disorders and the reliability of diagnosis, and issues in the aetiology of disorders among women and men during the transition to parenthood. Additionally, the Chapter will specifically consider salient methodological issues which provide the context for the critical assessment of research findings in this field.

II. UNDERSTANDING POSTPARTUM AFFECTIVE DISORDERS - DEFINITIONS

Postpartum affective disorders are commonly divided according to severity of symptoms/functional impairment among three classes: postpartum "baby blues", postpartum depression and postpartum psychosis. Each class of disorder will be considered separately and in the following order: baby blues, postpartum psychosis and postpartum depression.

1. BABY BLUES

The baby blues, (also reported as Maternity Blues) is generally described as a transient alteration in mood (associated with tearfulness, mood swings, and irritability) (Yalom et al, 1968; Pitt, 1973; Meares et al, 1976), occurring within the first few days following the birth of a child, usually lasting from 24-48 hours and frequently resolved within ten postpartum days (Robin, 1962; Pitt, 1973; O'Hara et al, 1991). Although it has been suggested that the blues may represent the onset of clinical depression in a subgroup of women (Whiffen, 1988), it appears to be a frequent experience for the majority of women, is relatively constant across cultures (York, 1990; Kumar, 1994), and is generally regarded as a normal concomitant of childbirth (Robin, 1962; Pitt, 1973). As there is some evidence to suggest that the blues are more common among women having a baby for the first time, it has been argued that the blues are related to the psychological adjustment to parenthood (Yalom et al, 1968;

Gelder, 1978). Prevalence estimates for baby blues range between 26%-85% (Robin, 1962; Yalom et al, 1968; Pitt, 1973; O'Hara et al, 1991; Pariser et al, 1997) depending on the assessment criteria employed.

2. POSTPARTUM PSYCHOSIS

Postpartum psychosis has been defined as "...a relatively rare disorder following childbirth with symptoms similar to general psychotic reactions: confusion, fatigue, agitation, alterations in mood, feelings of hopelessness and shame, delusions or auditory hallucinations, hyperactivity and rapid speech or mania " (Stern and Kruckman, 1983, p.1028). Although these symptoms, as noted by Herzog and Detre (1976) and Dean and Kendell (1981), are clearly similar to symptoms observed in individuals experiencing other acute non-puerperal psychotic conditions, there appear to be qualitative differences in the delusional content expressed by women experiencing postpartum psychosis. Among these women, common themes include guilt involving the baby/spouse (which may be related to infanticidal thoughts) and specific concerns about being unable to adequately care for the baby and/or adequately love the spouse (Herzog and Detre, 1976; Lee, 1997).

In common with other psychotic conditions, women experiencing postpartum psychosis will usually require hospitalisation. Treatment is essentially similar to that offered for other conditions (Brockington et al, 1982; Herzog and Detre, 1976). However, the prognosis for postpartum psychosis is more favourable than for other psychotic conditions (Harding, 1989; Bell et al, 1994). Postpartum psychosis appears to occur at relatively consistent prevalence rates (across societies and over time) ranging from 0.01%-0.02% (Rahim and Al-Sabiae, 1991; Kumar, 1994; Lee, 1997).

There is some evidence to suggest a link between biological predisposition and postpartum psychosis (Harris, 1994). This hypothesis is supported by findings

suggesting that women with a previous history of bipolar mood disorders (and other psychotic illnesses) are at greatest risk for postpartum psychosis (Marks et al, 1991), and, further, that women who experience postpartum psychosis are at elevated risks for later psychotic episodes, both postpartum (estimated as between 30%-50% with each subsequent delivery) and non-postpartum (DSM-IV, 1994; Schopf and Rust, 1994).

3. POSTPARTUM DEPRESSION

O'Hara and Zekoski (1988) stated that postpartum depression "...constitutes those affective disorders whose severity falls between the blues and psychosis" (p.17). Pitt (1968) described this range of disorders as "atypical depression" and it has been suggested that postpartum depressions are infrequently associated with suicidal ideation (Hopkins et al, 1984), are milder than depressions occurring at other times (O'Hara et al, 1991; Whiffen, 1992), and are of shorter duration (Beck, 1972; Whiffen, 1991).

In terms of presentation, the current consensus view, based on both quantitative and qualitative empirical evidence (Watson et al, 1984; Beck, 1992; Mauthner, 1993; Whiffen and Gotlib, 1993) is that postpartum depression is comparable to non-postpartum depression (defined as a Major Depressive Episode [DSM-IV, 1994] or as Major/Minor Depression [Research Diagnostic Criteria, Spitzer et al, 1978]), but may involve milder disturbance (Whiffen, 1991). It may, therefore, be characterised by depressed moods, episodes of tearfulness, markedly diminished interest in usual activities, appetite/sleep disturbances, fatigue/loss of energy, feelings of worthlessness/excessive guilt, and concentration/ memory decrements (DSM-IV, 1994). Symptoms may have their onset anywhere from two weeks to twelve months postpartum (most commonly within three to six months [O'Hara and Zekoski, 1988; Pariser et al, 1997]) and may be proceeded by periods of uneventful adjustment (Lee, 1997). Further, and in spite of some evidence to

the contrary (O'Hara, et al, 1990; Campbell and Cohn, 1991), the risk of depression, especially mild depression, appears to be greater in the postpartum period (particularly in the early post-natal months) than at other times in women's lives (Whiffen, 1992). Cox et al (1993), in a controlled study (n=232 women) examining the onset, duration and prevalence of postnatal depression, reported "...an increased risk of depression commencing shortly after delivery, a finding which suggested that childbirth and its immediate psychosocial sequelae were likely to be important causal factors for the non-psychotic depressions" (p.30). (Interestingly, postpartum depression, as a distinct diagnosis, does not exist in either DSM-IV or ICD-10).

There has been little consensus regarding the incidence and prevalence of postpartum depression (Hopkins et al, 1984). The wide variation reported (0.27%-30%) has been a function of differing criteria and assessment strategies (Hopkins et al, 1984; O'Hara and Zekoski, 1988). Some studies, for example, have been based on the detection of emotional symptoms, while others have been based on standard syndromal definitions (ICD-9; DSM-III-R). In studies which have not been based on standard psychiatric definitions, prevalence estimates have ranged from 2.9% during the postnatal period (Tod, 1964) to 30% (Gordon et al, 1965). In studies in which a conventionally defined diagnostic criterion has been employed, postnatal prevalence rates have been lower, ranging from 0.27% (Nott, 1982) to 20.8% (Pop et al, 1993). 0'Hara and Swain (1996) have noted that the postpartum depression prevalence estimates for self-reports is 12%, while the prevalence for interviews is 14%. There has been a consensus view that, as stated by Campbell and Cohn (1991): "...rates of postpartum depression have hovered around 10%" (p.594). More recently, O'Hara and Swain have suggested, on the basis of a large meta-analysis, that the average prevalence rate for non-psychotic postpartum depression is 13%.

III. UNDERSTANDING POSTPARTUM AFFECTIVE DISORDERS - METHODOLOGICAL ISSUES IN RESEARCH

The current understanding of postpartum affective disorders remains confounded by a range of methodological difficulties associated with the research literature. These difficulties include issues in research design, outcome measures, timing of assessments and reliability of diagnosis.

1. RESEARCH DESIGN

Most contemporary studies of postpartum affective disorder, particularly those investigating postpartum depression, have relied on prospective research designs (Kumar and Robson, 1984; O'Hara et al, 1984; O'Hara et al 1991). There are obvious advantages to prospective designs: participants are more likely to accurately report current thoughts/feelings/events than those occurring in the past and there is less likelihood of bias for either researcher or participant with respect to hypothesised predictive variables if these variables are measured prior to the measurement of the outcome variables.

However, many prospective designs have at least some variables that are measured co-terminously with the assessment of postpartum disorder. It is frequently the case that stressful life-events occurring since the beginning of pregnancy/time of delivery are assessed as part of postnatal assessment. There is evidence to suggest that those women who are depressed may be biased toward the reporting of more negative events than non-depressed women or may view similar events in more negative terms (Beck et al, 1979; Hopkins et al, 1984).

2. OUTCOME MEASURES

A variety of outcome measures of disorder have been employed among studies. These have ranged from clinician judgements, to the use of standard

self-report scales, including the Beck Depression Inventory (BDI; Beck et al, 1961) and the General Health Questionnaire (GHQ; Goldberg, 1972), and semi-structured interviews.

Although self-report scales represent a refinement in objectivity over more subjective clinician judgements, they may also lead to mis-classification of participants (false positives/false negatives). There are a number of reasons for this assertion: "caseness scores" (scores which indicate a level of symptomatolgy indicating morbidity and which are usually defined by a cut-off score) may reflect factors other than the target (e.g. depression) such as physical ill-health or anxiety-related difficulties and rarely address important diagnostic information (like the length of time symptoms have been present or the extent to which the symptoms interfere with activities of daily living). There is also substantial evidence indicating that self-report measures are subject to malingering and faking (Anastasi, 1988), and given the preponderance of media images in which "happy mothers" are the norm, issues of social desirability must be considered (Nicolson, 1993).

The BDI (Beck et al, 1961) is composed of a number of items which, during the course of normal postpartum adjustment, would provide elevated scores for depression (fatigue and sleep disturbance, body image, loss of interest in sex). Huffman et al (1990) have suggested that the BDI should be used with care with pregnant women but have also emphasised that those items focussing on cognitive/affective judgements were the most sensitive in differentiating those pregnant women at risk for postnatal depression. Measurement difficulty has, to a significant degree, been obviated by the development of scales validated for use with this population, like the Edinburgh Postnatal Depression Scale (Cox et al, 1987). However, it must be noted that self-report measures have been observed to yield significantly higher estimates of post-partum depression than more rigorous interview methods (O'Hara and Swain, 1996).

3. TIMING OF ASSSESSMENTS

As there has been debate as to what constitutes the time limit of the postpartum period (O'Hara and Zekoski, 1988), there has been understandable debate as to the limit for the onset of postpartum affective disorders. With regard to postpartum psychosis, Brockington et al (1981) and Meltzer and Kumar (1985) have argued that onset within two weeks postpartum is essential and Kendell et al (1976) have suggested that there is increased risk for psychosis within the first trimester postpartum. There is no comparable consensus regarding postpartum depression, either regarding onset or risk period, although a somewhat arbitrary limit for onset, approximately 3-6 months postpartum, has been suggested (O'Hara and Zekoski, 1988). As noted by O'Hara and Zekoski (1988), "A major problem is determining a time limit for the onset of postpartum psychosis or depression is our continuing ignorance of the specific aetiological or risk factors associated with childbirth" (p.20).

The timing of assessment for postpartum affective disorders has, thus, largely been influenced by researchers' decisions regarding high-risk periods. In practice, it appears that this has usually meant that researchers have chosen to assess at the earliest possible point in the postpartum period (O'Hara and Zekoski, 1988). Early assessment has meant that financial resources and potential participant attrition rates could be reduced (with shorter rather than longer research periods) and that more reliable information regarding episodes of disorder could be obtained through timeous assessment. The difficulty with this strategy is that episodes of depression that occur late in the postpartum period are missed and, therefore, under-reported.

A study by Watson et al (1984) illustrates the degree to which the timing of assessments affects reported prevalence rates. In this study, Watson and colleagues followed 128 British women from the first trimester of pregnancy to one year postpartum. Two diagnostic interviews were conducted by a research psychiatrist during this period (16th week of pregnancy/six weeks postpartum),

in addition to six further assessments during pregnancy and five further assessments in the postpartum year conducted by a psychologist. Without the additional assessments in the postpartum year, at least four cases of depression lasting three months or more and with onset in the second and third postpartum month would not have been reported.

4. RELIABILITY OF DIAGNOSIS

Although there appears to be consensual agreement that there are three types of postpartum affective disorders, the arbitrary nature of this taxonomy and the reliability of diagnosis have been consistent difficulties.

The issue of the reliability of diagnostic criteria in psychiatric diagnosis generally has been of long-standing concern, first raised in papers by Beck et al (1962). This difficulty has, to some degree, been reduced by the development of defined diagnostic criteria (Spitzer et al, 1978) and the subsequent development of semi-structured interview scales (Wing et al, 1974; Endicott and Spitzer, 1978). However, in spite of evidence indicating that reliable psychiatric diagnoses can be made in the context of operational diagnostic criteria/semi-structured interviews, it cannot be assumed that a reliable diagnosis is being made in the absence of a reliability study (O'Hara and Zekoski, 1988). In many studies of postpartum affective disorders, evidence regarding the reliability of diagnostic clinical judgements is lacking.

A related issue concerns the definition of pathology incorporated by the medical/psychiatric model. From this perspective, a "normal" response to the puerperal period is the absence of disorder. Researchers who have relied on syndromal definitions (as defined, for example, in ICD-10/DSM-III-R/DSM-IV) in investigating the incidence/prevalence of postpartum depression have described the majority of women in their sample as normal (Cox et al, 1982; O'Hara et al, 1984). In contrast, in studies in which the focus has been on the

depressive symptomatology rather than syndromal depression, fewer "normal" participants have been identified (Nilsson, 1970).

In considering the arbitrary nature of the classification of postpartum affective disorders, there appears to be a significant degree of heterogeneity of symptom presentation/degree of impairment among the non-psychotic disturbances (Meltzer and Kumar, 1985). However, it has been suggested that postpartum affective mood disturbances can be considered along a continuum of severity ranging from no-disturbance to severe endogenous non-psychotic depression (O'Hara and Zekoski, 1988). O'Hara and Zekoski (1988) have noted: "...there are no natural dividing points for distinguishing between various subtypes of postpartum affective disorders. Although one can devise criteria for one diagnosis or another, women at the boundaries will be very similar to each other" (p.48). This view is reflected in broader perspectives on the distinctions between endogenous and non-endogenous depressions (Zimmerman et al, 1986).

IV. AETIOLOGY OF POSTPARTUM AFFECTIVE DISORDERS

In examining the aetiology of postpartum affective disorders, postpartum depression has been the disorder most exhaustively researched. The data reported here, therefore, will, largely, refer to postpartum depression. Epidemiological studies have explored the relationship between postpartum depression and a range of demographic variables, including: age (Gordon and Gordon, 1959; Hayworth et al, 1980; Paykel et al, 1980; Feggetter and Gath, 1981; O'Hara et al, 1984; Kumar and Robson, 1984); marital status (Pitt, 1968; Blair et al, 1970; O'Hara, 1980; Hayworth et al, 1980; Paykel et al, 1980; Feggetter and Gath, 1981); parity (Gordon, 1961; Tod, 1964; Jarrahi-Zadeh et al, 1969; Nilsson and Almgren, 1970; Blair et al, 1970; Martin, 1977; Hayworth et al, 1980; Paykel et al, 1980; Playfair and Gower, 1981; Bridge et al, 1985); psychiatric history (Gordon and Gordon, 1959; Tod, 1964; Pitt, 1968; Nilsson et

al, 1967; Dalton,1971; Zajicek and Wolkind, 1978; O'Hara, 1980; Paykel et al, 1980; O'Hara et al, 1983; Watson et al, 1984; O'Hara, 1986); socio-economic status (Feggetter and Gath, 1981; Playfair and Gower, 1981; Watson et al, 1984); and family history of psychiatric disorder (Kumar and Robson, 1984; O'Hara ,1986).

Biological variables, both biological factors considered relevant to depressions occurring at other times (non-specific factors) (Treadway et al, 1969; Burke and Roulet, 1970; Handley et al, 1977; Handley et al, 1980; Greenwood and Parker, 1984; Gard et al, 1986), and biological factors specifically related to the pregnancy/childbirth/postpartum experience (specific biological factors) (Dalton, 1971; Davidson, 1972; Nott et al, 1976; Steiner, 1979; Dalton, 1980; Gard et al, 1986) have been of particular interest to researchers. Additionally, obstetrical factors have been examined, usually in relation to the presence of obstetrical complications (Pitt, 1968; Oakley, 1980; Paykel et al, 1980; O'Hara et al, 1982; Elliott et al, 1984; Murray and Cartwright, 1993).

Psychological variables have been considered as both intra-psychic factors and interpersonal factors. Intra-psychic factors have included: cognitive-behavioural variables (O'Hara et al, 1982; Manly et al, 1982; Cutrona, 1983; O'Hara et al, 1984); neuroticism/anxiety variables (Tod, 1964; Pitt, 1968; Dalton, 1971; Hayworth et al, 1980; Watson et al, 1984; Kumar and Robson, 1984); and psycho-dynamic formulations (Karacan and Williams, 1970; Klatskin and Eron, 1970; Blum, 1978). Interpersonal psychic factors have included: life events (Gordon and Gordon, 1959; Pitt, 1968; Grossman et al, 1980; Paykel et al, 1980; O'Hara et al, 1982/1983; Kumar and Robson, 1984; O'Hara et al, 1984); marital relationship variables (Braverman and Roux, 1978; Mueller, 1980; Crnic et al, 1983; Watson et al, 1984; Kumar and Robson, 1984; O'Hara, 1986), mother-infant bonding failure variables (Margison, 1982; Livingood et al, 1983; Kumar and Robson, 1984); and social support variables (Gordon and Gordon, 1959; Mueller, 1980; Paykel et al, 1980; O'Hara et al, 1983; Cutrona, 1984; O'Hara, 1986; Hopkins et al, 1986).

Representative research from each of these areas of enquiry will be considered.

1. DEMOGRAPHIC VARIABLES

In examining the relationship between age and postpartum depression, there does not appear to be clear evidence of significant association. Four studies have suggested that younger women were more at risk (Hayworth et al, 1980; Paykel et al, 1980; Feggetter and Gath, 1981; O'Hara et al, 1984) and two other studies (Gordon and Gordon, 1959; Kumar and Robson, 1984) have suggested that older women were at greater risk. However, it must be noted that these studies were conducted during a time when pregnancy and childbirth were likely to occur within a more restricted age range (Blake, 1982).

The evidence for a relationship between marital status and postpartum depression is, again, equivocal. Feggetter and Gath (1981) suggested that single motherhood was associated with greater risk for postpartum depression and O'Hara (1980) noted a significant relationship between divorce and postpartum depression. Other studies (Pitt, 1968; Blair et al, 1970; Hayworth et al, 1980; Paykel et al, 1980) have failed to find any relationship between these variables. However, it must be noted that, historically, most studies investigating postpartum depression have relied on married women as participants.

The evidence regarding parity and its relationship to postpartum depression is also, as noted by Hopkins et al (1984) "...inconsistent and contradictory" (p.504). Findings have suggested an absence of relationship between these variables (Nilsson and Almgren, 1970; Blair et al, 1970; Hayworth et al, 1980; Paykel et al, 1980); an association between higher parity and postpartum depression (Tod, 1964; Jarrahi-Zadeh et al, 1969; Playfair and Gower, 1981); and an association between lower parity and postpartum depression (Gordon,

1961; Martin, 1977; Bridge et al, 1985). The differences in these findings may reflect different sampling techniques and assessment strategies employed in these studies.

Although both Pitt (1968) and Dalton (1971) indicated that their studies failed to find an association between previous psychiatric history and postpartum depression, the majority of studies in the field support an association between these variables (Gordon and Gordon, 1959; Tod, 1964; Nilsson et al, 1967; Zajicek and Wolkind, 1978; O'Hara, 1980; Paykel et al, 1980; O'Hara et al, 1983; Watson et al, 1984; O'Hara, 1986). O'Hara et al (1983) reported (on the basis of assessments made co-terminously with the postpartum depression interview) that depressed women (n=11) reported a mean of 1.82 previous episodes of depression as compared to 0.16 previous episodes reported by non-depressed women (n=19). O'Hara (1986) (in a study in which the history of depression was determined during standard interviews conducted during pregnancy) stated that depressed women (n=12) reported a mean of 2.25 previous episodes of depression as compared to 0.75 previous episodes reported by the non-depressed women (n=87). Whiffen and Gotlib (1993), have stated that "...women with a history of help-seeking for any kind of emotional problem may be at risk for developing depression after the birth of a child" (p.492). The consensus view is that, in general, where women have experienced previous psychiatric disorder (usually depression) they are at increased risk for postpartum depression (Bell et al, 1994).

Three studies (Feggetter and Gath, 1981; Playfair and Gower, 1981; Hobfoll et al, 1995) have indicated a relationship between socio-economic status and postpartum depression. In these studies, higher socio-economic status was associated with lower levels of postpartum depression. The study by Hobfoll et al (1995), noted that rates of mild depression (as defined by Research Diagnostic Criteria; Spitzer et al, 1978) were elevated for women with low

socio-economic status, while rates of major depression were similar for these women and a middle-class sample. In a study by Campbell and Cohn (1991), women experiencing postpartum depressions were less well-educated than the non-depressed sample. However, studies by Tod (1964), Oakley (1980), Paykel et al (1980) and Watson et al (1984) have failed to find any association between socio-economic status and postpartum depression. This is a particularly interesting observation, given the significant associations between socio-economic status and non-postpartum depressions noted by Brown and Harris (1978).

Similarly, although Kumar and Robson (1984) failed to find an association between family psychiatric history and postpartum depression, O'Hara (1986) indicated that a significantly higher proportion of a depressed sample of women (as compared to the non-depressed sample) had at least one first degree relative who had been depressed.

In summary, it appears that research studies have failed to demonstrate consistent findings with regard to age, marital status, parity or socio-economic status as risk factors for postpartum depression. However, there does appear to be evidence indicating that previous, non-postpartum episodes of non-psychotic depression are strongly predictive of postpartum depression (Gotlib et al, 1989; Bell et al, 1994). Further, there is some evidence to suggest that women who have not experienced previous episodes of non-postpartum depression are less depressed during episodes of postpartum depression, more likely to recover quickly and less likely to relapse (Bell et al, 1994).

2. BIOLOGICAL VARIABLES

There is an extensive research literature investigating the effects of non-specific biological factors (biological factors considered relevant to depressions occurring at times other than the pregnancy/ childbirth/ postpartum experience) and specific biological factors (biological factors concerned with affective disorders occurring during the pregnancy/ childbirth/pregnancy experience) on postpartum affective disorders (George and Sandler, 1988; Deakin, 1988). Representative research from both areas of investigation will be reviewed here.

i) Non-Specific Biological Factors

In examining biological factors considered relevant to depressions occurring at times other than the pregnancy/childbirth/postpartum experience, researchers have, for example, investigated the effects of neurotransmitter precursors (tryptophan) (Handley et al, 1980), neurotransmitters like norepinephrine (Treadway et al, 1969) and hormones like cortisol (Burke and Roulet, 1970; Greenwood and Parker, 1984).

Tryptophan is the "...rate-limiting enzyme in the production of the central neurotransmitter, 5-hydroxytryptamine (5-HT), and there is increasing evidence of a disturbance of 5-HT metabolism in depressive illness" (Hopkins et al, 1984, p.506). There has been evidence to indicate that low levels of circulating tryptophan are associated with the development of depression (Handley et al, 1977; Charney et al, 1984; Heninger et al, 1984). Based on this evidence, Handley et al (1980) conducted a study (n=71 women) in which blood levels of circulating tryptophan were assessed at 36/38 weeks gestation/days 1-5 postpartum/six weeks postpartum. Women demonstrating caseness levels of depressive symptomatology on standard measures (n=28) in the first week postpartum demonstrated a later rise in total tryptophan than non-cases.

However, women demonstrating caseness at six weeks (n=16) did not demonstrate this pattern. In a subsequent study, Gard et al (1986), failed to demonstrate a relationship between free/total tryptophan levels postpartum and depressive symptoms lasting two weeks or more in the first nine postpartum months.

In the study by Treadway et al (1969), levels of norepinephrine in pregnant/postpartum women and matched controls (n=21) were assessed. The results suggested that there was a decreased level of norepinephrine during pregnancy/postpartum period and an inverse relationship between norepinephrine levels and depressive symptomatology (as defined by a standard self-rating scale) during pregnancy only. This finding was not replicated in the postpartum period, nor were the prepartum findings replicated by Kuevi et al (1983) with a sample of 44 women.

Dysfunction in the regulation of the hypothalamic-pituitary-adrenocorticoid system (HPAC) has been implicated in vulnerability to depression (O'Hara and Zekoski, 1988). In pregnancy, especially late pregnancy, women demonstrate high levels of unbound cortisol which is generally accommodated by increases in corticosteroid-binding globulin (CBG) (Burke and Roulet, 1970). Given the possibility of dysregulation of this system following childbirth, the role of cortisol in postpartum depression has been investigated (as initially suggested by Bower and Altschule, 1956). Handley et al (1980) indicated that a raised plasma cortisol level from 38 weeks gestation was associated with severity of episodes of postpartum blues. However, in a subsequent study, Kuevi et al (1983) failed to demonstrate differences between women experiencing postpartum blues and unaffected women.

In a study by Greenwood and Parker (1984) (n=45 women), and in spite of evidence suggesting dysregulation of the HPAC system in the first week postpartum, there was no relationship demonstrated between plasma cortisol levels and depressive symptomatolgy at six weeks postpartum. George and

Sandler (1988) suggest that these discrepancies may be related to analytical techniques used to measure cortisol levels, with the earlier study by Handly et al (1980) relying on a less sensitive method than the later studies. It must also be noted that these studies relied on relatively small numbers of participants.

ii) Specific Biological Factors

Research on the role of hormones (steroids like oestrogen and progesterone, and peptides like prolactin) in postpartum depression appears to have emanated from indirect theoretical speculation. In demonstrating an association between menstrual difficulties and postpartum affective disorders (including postpartum blues and depression), researchers hypothesised that postpartum affective disorders were the result of failure among affected women to adjust to the significant hormonal changes occurring post-delivery (Pitt, 1968/1973; Yalom et al, 1968; Dalton, 1971). As noted by Hopkins et al (1984), it was argued that "...women who experience difficulty in physiologically compensating for the relatively minor hormonal changes of the menstrual cycle (as evidenced by menstrual problems), or who are biologically hypersensitive to subtle endocrinological stimuli, will have even greater difficulty adjusting to the dramatic decrease in placental steroid output during parturition " (p.505). However, studies by Davidson (1972) and O'Hara (1980) have failed to find significant associations between menstrual difficulties (including age of menarche, dysmennorhea, and/or menstrual dysfunction) and mild/severe postpartum blues or postpartum depression.

The concentrations of progesterone and oestrogen fall quickly following childbirth (George and Sandler, 1988). It was argued by Gelder (1978) that these hormonal changes could be contributory factors in postpartum affective disorders. Steiner (1979) related postpartum depression to high levels of prolactin and low levels of progesterone and oestrogen. Dalton (1980) has argued that low levels of progesterone are related to both pre-menstrual mood

disorders and postpartum depression, and has advocated the use of progesterone (per injection) during the early postpartum period to prevent depression. However, this treatment regime has not been fully supported in controlled clinical trials (George and Sandler, 1988). Other studies have indicated that progesterone alone was ineffective in treating psychotic puerperal mood disorders (Hatotani et al, 1979) and studies investigating differences in progesterone levels between women experiencing postpartum blues and unaffected women have led to discrepant findings (Nott et al, 1976; Ballinger et al, 1982). Kuevi et al (1983) indicated that women without puerperal mood disorders demonstrated a greater drop in progesterone levels than affected women.

During pregnancy, oestrogen levels increase and then decrease rapidly following childbirth (George and Sandler, 1988). Bonnar et al (1975) argued for a link between this hormonal change and postpartum blues and psychotic conditions. However, studies investigating this factor have failed to reach agreement (Nott et al, 1976; Kuevi et al, 1983).

Karnosh and Hope (1937) suggested a link between puerperal psychosis and prolactin (formerly referred to as lactogenic hormone). After childbirth, prolactin stimulates milk secretion and inhibits ovulation (George and Sandler, 1988). George et al (1980) described a significant correlation between plasma prolactin levels and symptoms of anxiety, depression and tension (as identified by the Present State Examination [Cooper et al, 1977]) among women (n=38) during the first postpartum week. However, this relationship was not supported in studies by Nott et al (1976), Kuevi et al (1983) or Alder et al (1986). It has been suggested by George and Sandler (1988) that differences in research methodologies (which, for example, in the latter studies did not include the measurement of basal prolactin secretion) may have contributed to the differences in outcome observed in these studies.

In a prospective study with childbearing women (n=182) and a control of non-childbearing women (n=179) and in which the effects of progesterone, estradiol, prolactin and cortisol (and a variety of psycho-social factors including dysfunctional self-control attitudes, poor marital adjustment, and dysphoria during pregnancy) on postpartum depression were examined, O'Hara et al (1991) noted that, with the exception of lower levels of estradiol for depressed participants on two occasions (week 36 prepartum/day 2 postpartum), there was no evidence of hormonal influences on postpartum depression. In this study, which is possibly the most adequate in the area, O'Hara et al (1991) stated "...there were no significant differences in the amount of change in any of the hormone levels from late pregnancy to the early puerperium for depressed and non-depressed subjects" (p.71).

iii) Obsterical Factors

In the context of postpartum depression, obstetrical complications have been hypothesised as a stressor likely to predict disorder. The research, however, has employed a variety of outcome measures to define depression and, further, the definition of "obstetrical complication" has varied considerably. For example, Pitt (1968) considered toxaemia and anaemia, Paykel et al (1980) considered labour complications and Oakley (1980) considered the role of technological intervention in the birth process, including general anaesthesia and caesarean deliveries. Cox et al (1982) stated that there was no association between delivery method and diagnosis of depression and Elliott et al (1984) found no relationship between obstetrical complications and post-natal depression. Paykel et al (1980) and O'Hara et al (1982) suggested that diagnosis of depression was related to less complicated deliveries while O'Hara et al (1984) subsequently argued that diagnosis of depression was related to higher risk deliveries. Methodological differences may have accounted for these equivocal findings.

For example, in comparing their study (in which there was no relationship between obstetrical complications and post-natal depression observed) with the study by Oakley (1980), Elliott et al (1984) noted a number of methodological differences. In their study, Elliott et al (1984) reported that participants received care from one obstetrical consultant only and that the variance in management procedures was, therefore, potentially reduced. Further, the definition of a "technologically assisted birth" differed between these studies with Oakley (1980) employing a more inclusive criteria (including intravenous feeding and catheterisation). Finally, the number of participants with labour complications (n= 28 mothers) in the Elliott et al (1984) study was small and sample size may have contributed to the non-significant finding. Elliott et al (1984) argued that "...It may be also that technology per se does not have a universal directional effect on post-natal mood but rather it depends on how the technology was perceived [by the mother]" (p.30).

More recently, Murray and Cartwright (1993) reported that complications of pregnancy, labour and delivery were not associated with post-natal depression among a sample of primaparous mothers (n=105). However, they noted that "...high obstetric risk was related to the occurrence of post-natal depression in women who were already psychiatrically vulnerable, particularly risks involving difficulties during labour and those arising from the method of delivery" (p.218). In this study, obstetric events were coded according to the Peripartum Events Scale (O'Hara et al, 1986) and the incidence of depression was defined with reference to the Research Diagnostic Criteria (Spitzer et al, 1978).

In summary, the current consensus view appears to be that there is little convincing evidence, for the majority of women who experience postnatal depression, to indicate a relationship between either biological factors (non-specific/specific biological factors) or obstetrical factors and postnatal depression (Elliott et al, 1984; O'Hara and Zekoski, 1988; O'Hara et al, 1991; Whiffen 1991/1992; Albright, 1993; Murray and Cartwright, 1993). However, the possibility remains that, for a minority of women with severe postnatal

depressions and/or puerperal psychosis, either biological pre-dispositions (Harris, 1994) or specific biological factors may be implicated (Elliott, 1990).

3. PSYCHOLOGICAL VARIABLES

i) Intra-Psychic Factors

Researchers have identified a number of cognitive-behavioural variables as central to the development of depression: excessive monitoring of negative events, insufficient self-reward, excessive self punishment (Rehm, 1978); dysfunctional attributional styles related to internal/stable/global attributions for failure and external/unstable attributions for success (Abramson et al, 1978); dysfunctional attitudes/beliefs regarding the self/present/future ("the cognitive triad") (Beck, 1972); and social skills deficits/deficits in ability to elicit positive reinforcement from others (Lewinsohn, 1974).

In a prospective study in which these variables were assessed during pregnancy, and in which depression was assessed postnatally with the BDI (Beck et al, 1961) and a structured interview schedule, O'Hara et al (1982) suggested, unsurprisingly, that deficits in self-control, attributional style and social skills, as measured during pregnancy, were associated with postpartum depression. The relationship between attributional style and postpartum depression was replicated by Cutrona (1983). However, this finding was not replicated in studies by Manly et al (1982), and O'Hara et al (1984). Similarly, in the study by O'Hara et al (1984), deficits in self-control (as measured by the Self-Control Questionnaire; Rehm et al, 1981) were not found to be significant predictors of postpartum depression. Gotlib et al (1991) stated that "...cognitive style during pregnancy does not appear to be a robust concomitant or predictor of depression in the postpartum "(p.129).

In early studies of postpartum depression, Tod (1964) suggested that affected women had experienced pre-existing inadequate personality disorders and Pitt

(1968) suggested (with data based on the Maudsley Personality Inventory; Eysenck, 1952) that affected women were more neurotic/less extroverted when compared with non-affected women. The finding regarding neuroticism was not supported by Kumar and Robson (1984) (with data based on the Eysenck Personality Questionnaire; Eysenck and Eysenck, 1975). However, Watson et al (1984) (with data also based on the EPQ) suggested that women with postpartum depression were more neurotic during pregnancy than the non-depressed sample. (There is a possibility that this finding may have been slightly confounded by the observation that several of the women identified as experiencing postpartum depression were also depressed during pregnancy.)

Although Pitt (1968) indicated that there were no differences during pregnancy on measures of anxiety between women subsequently experiencing postpartum depression and non-depressed women, Dalton (1971) noted that anxiety during pregnancy was predictive of later postpartum depression. However, a standardised measure of anxiety was not employed in this study. In two studies in which a standardised measure of anxiety was employed (Hayworth et al, 1980; Watson et al, 1984) a similar finding was observed. Interestingly, in the study by Hayworth et al (1980) both high anxiety and high hostility were related to postpartum depression.

Psychodynamic formulations have suggested that postpartum depression results from unresolved conflicts regarding motherhood/feminine role (Karacan and Williams, 1970; Klatskin and Eron, 1970; Blum, 1978). According to psychodynamic theory, psychological regression which, it is argued, occurs in all women during pregnancy, serves to invoke earlier conflict "...particularly in cases where there are inadequate maternal role models or there is a rejection of maternal role models" (Hopkins et al, 1984, p.506). Unfortunately, there is no empirical support for this theoretical position.

ii) Inter-Personal Factors

In considering the aetiology of depression occurring outwith the pregnancy/childbirth/postpartum experience, most psychological models reflect a diathesis-stress formulation (O'Hara et al, 1991). Diathesis (vulnerability variables) include intra-psychic factors noted earlier (e.g. depressive self-schema, and dysfunctional attributional styles). Stressors have been defined as negative life events and/or life events in which significant adjustment is required. Based on these findings, further lines of enquiry have examined the relationship between childbirth, defined as a significant stressor, and other cumulative stressors occurring during the postpartum period.

Gordon and Gordon (1959,1960) have been acknowledged as the first researchers to explore the relationship between psychosocial stressors and postpartum affective disorders (Hopkins et al, 1984). Results suggested a positive association between environmental stress and emotional disequilibrium in the postpartum period. However, these studies were flawed by a number of methodological inadequacies including non-standardised assessment measures, non-blind ratings of emotional distress by clinicians, and retrospective reports of stressful life events.

Grossman et al (1980), using both standardised self-reports and interview methods, investigated the relationship between life changes occurring in the first/third trimesters of pregnancy and subsequent psychological adaptation at two months postpartum. The results suggested that life changes in the third trimester (but not during the first trimester) were correlated with self-reports of anxiety and depression for experienced (as opposed to new) mothers only. In explaining their findings, the authors argued that, for new mothers, the intensity of the postpartum experience obviated the effects of external events (Grossman et al, 1980). In considering this literature, it must be noted that "...life events per se account for only about 10% of the variance in depression measures" (Hopkins et al, 1984, p.509) and that, therefore, variables such as

social support that moderate the effects of stressful life events must also be examined.

Studies by Pitt (1968) and Kumar and Robson (1984) have failed to find an association between stressful life events and postpartum depression. However, at least five other studies (Paykel et al, 1980; O'Hara et al, 1982/1983; O'Hara et al, 1984; O'Hara et al, 1991) have reported significant associations. In the study by O'Hara et al (1984), an association was found between stressful life events from the beginning of pregnancy, self-reports of depression and a formal diagnosis of postpartum depression.

In the general literature on depression, the mediating effects of a confiding relationship on symptoms of depression have been noted (Brown and Harris, 1978). In studies by Belsky (1981), Mueller (1980) and Crnic et al (1983), the importance of the supportive presence of a partner during the early postpartum months has been observed. The association between poor marital relationships and high levels of depressive symptomatology/postpartum depression has been identified in a variety of studies (Braverman and Roux, 1978; Watson et al, 1984; Kumar and Robson, 1984; O'Hara et al, 1983; Watson et al, 1984; O'Hara, 1986). Gotlib et al (1991) stated "...Although some studies have implicated a lack of support from persons other than the spouse in the onset of postpartum depression, results of the majority of investigations point more specifically to marital conflict and a lack of spousal support " (p.123).

The effects of the transition to parenthood on relationship quality have been fully examined in Chapter One. However, in the series of studies reported here, the results have indicated a significant association between postpartum affective disorder (characterised as both increased depressive symptomatology and postpartum depression) and relatively poor marital quality (Braverman and Roux, 1978; O'Hara, 1986; Boyce, 1994). In the study by O'Hara et al (1983), it was reported that those participants meeting criteria for postpartum

depression stated that, when compared to the control sample, instrumental and emotional support was less accessible to them and, further, that they were less satisfied than controls with available support from partners and other network members. In the prospective study by Gotlib et al (1991), in which women (n=730) were assessed on demographic variables, perceived stress, marital satisfaction, perceptions of their own parenting, dysfunctional congnitions, coping styles and measures of depressive symptomatology/diagnostic status, the authors suggested that marital discord precedes postpartum depressive episodes and, further, that marital discord may be a stable characteristic for those prone to depression.

In a longitudinal study (n=142 first-time parents), Hock et al (1995) examined several variables, including maternal depressive symptomatology at nine months postpartum, maternal/paternal marital satisfaction, and maternal/paternal sex role attitudes (role traditional vs. non-traditional) concerning the parental relationship. The results indicated that mothers who were dissatisfied with their relationships and who demonstrated more traditional sex role attitudes reported significantly more depressive symptomatolgy at nine months postpartum. Further, women reporting greater depressive symptomatology were in relationships with husbands/partners who also reported greater marital dissatisfaction and traditional sex role attitudes. It was observed that women experiencing high levels of depressive symptomatology during pregnancy were at greater risk for the development of post-natal depressive symptomatology if husbands/partners exhibited highly traditional sex role attitudes. As noted by Hock et al (1995), "...These findings underline the importance of assessing both marital satisfaction and marital sex role traditionalism in understanding the development and course of depressive symptomatolgy during the transition to parenthood." (P.87).

These findings contradict some of the findings related to traditionalism during the transition to parenthood reported in Chapter One. In Chapter One, Belsky (1985), Belsky et al (1986) and Ruble et al (1988) observed that women with

non-traditional beliefs regarding parenting experienced greater dissatisfaction with the parental relationship during the transition to parenthood than more traditional peers, largely as a function of violated expectations. However, Basoff (1984), in support of the findings by Hock et al (1995), noted that mothers identified as either masculine or androgynous demonstrated less psychological distress than more feminine peers.

One possible explanation for these divergent findings is that the studies by Belsky (1985), Belsky et al (1986), and Ruble et al (1988) used behaviour-based measures reflecting divisions of household labour as opposed to the sex role traditionalism measure employed by Hock et al (1995) which "...assessed attitudes and preferences with regard to decision making and obligation within the marital relationship"(p. 86). In considering the study by Basoff (1984), it must be noted that the relationship between attitudes of "masculinity" and attitudes regarding the division of household labour was unclear. In a study by Whisman and Jacobson (1989), women reporting higher levels of depressive symptomatology and who also demonstrated lower masculinity scores, were described as experiencing less relationship satisfaction as a result of inequalities in decision making/ distribution of household tasks/distribution of child-rearing responsibilities than non-depressed women. These apparently contradictory findings reflect the problematic nature of "masculine/feminine" and "traditional/non-traditional" constructs and their measurement (as noted in Chapter One).

Mueller (1980) noted that social support offered by friends/relatives to individuals experiencing psychosocial stress could reduce the likelihood of depression. This finding has been complimented by other studies which have indicated the significant role of social support, both as a mediating and independent variable, in reducing the incidence of depression (Brown and Harris,1978; Mitchell and Trickett, 1980). As noted by Hopkins et al (1984) "...Social support would appear to be particularly relevant for postpartum

women who, because of the increased demands imposed by the birth of a child, may require additional emotional and instrumental support " (p.510).

O'Hara et al (1983) reported that depressed women described both their husbands and, to a lesser degree, their other confidants/family as being less supportive (both instrumentally and emotionally) during the postpartum period. However, when compared to non-depressed controls, these women had not indicated the same lack of perceived support from either source during pregnancy, a finding noted in a follow-up study by O'Hara (1986). (This finding may reflect negative attributions experienced by depressed women [Beck, 1972]). Cutrona (1984) suggested that, rather than the quality of partner relationships, the strongest predictor of depressive symptomatology for women during the postpartum period was their level of companionship with other women. Hopkins et al (1986) failed to find any association among several measures of social support and formal diagnosis of postpartum depression. More recently, Brugha et al (1998), in a prospective study evaluating the role of specific social and psychological variables in the prediction of depressive symptomatology and disorders following childbirth (n=507 primaparous woman) stated that depressive symptomatology on the GHQ (Goldberg and Williams, 1988) was predicted by "...lack of perceived support from members of the woman's primary group and lack of support in relation to the event of becoming pregnant..."(p.63).

There is some evidence to suggest that failures in mother-infant bonding may be of aetiological significance in postpartum depression (Margison, 1982). It has been reported that depressed mothers are less attached to babies than non-depressed mothers (Margison,1982; Stein et al, 1991), that mothers who were depressed at three months postpartum were more likely to describe feelings of indifference/dislike for their babies than non-depressed mothers (Kumar and Robson, 1984) and that mothers demonstrating high levels of depressive symptoms were rated by observers as providing lower levels of unconditional positive regard to infants than mothers with lower levels of

symptomatology (Livingood et al, 1983). (However, it must be noted that failures in mother-infant bonding may occur as a result of depressive symtomatology, rather than as a causal factor.) The pervasive negative effects of post-natal depression on child cognitive and emotional development (which are particularly evident among boys of depressed mothers) have been reported by Murray (1997).

In the recent meta-analysis by O'Hara and Swain (1996), in which results from a large number (approximately sixty studies) were investigated, the authors described the "prototypical" pregnant woman at risk for postpartum depression: most likely to occupy a lower social class (but with women from middle and upper classes well-represented), likely to have experienced life stressors during pregnancy, experiencing marital disharmony and/or finding her partner and others in her social network less supportive than might be desired, and likely to have experienced previous mental ill-health, with current evidence of anxiety and, possibly, mild depression.

In summary, the research investigating the relationship between psychological factors (both intra-psychic and interpersonal) and postpartum depression appears to indicate that those factors predictive of depression at times other than the pregnancy/childbirth/ postpartum experience (including stressful life-events, relationship difficulties, low social support, and, as noted earlier, previous depressive illness) are strongly predictive factors for postpartum depression and subsequent clinical outcome/recovery (Atkinson and Rickel, 1984; Whiffen, 1991/1992; Gotlib et al, 1991; Lovestone and Kumar, 1993). Interestingly, the consistent findings linking dissatisfactions with the marital relationship and postpartum depressive symptomatology and/or syndromal depression appear, in general, to compliment the observations reported in Chapter One.

V. DECONSTRUCTING POSTPARTUM AFFECTIVE DISORDERS

In reviewing postpartum affective disorders in this Chapter, exclusive focus has been placed on research generated from within the medical model. In this tradition, postpartum affective disorders have been considered "illnesses", and research studies have attempted to explore issues in the prediction, prevention and treatment of this state of ill-health (Cox and Holden, 1994). The research methodologies employed have emanated from a positivistic framework in which the aim has been to understand postpartum disorders objectively. As a result, it has been argued, mothers' accounts and subjective experiences of postpartum affective disorders have been largely ignored (Mauthner, 1993).

In an attempt to deconstruct the medical model understandings of postpartum affective disorder, feminist scholars have explicitly sought to elicit mothers' accounts of post-natal depression and to delineate the socio-political conditions under which mothers parent children in western societies. While it is neither the purpose nor intention of this Chapter to enter into discourse on alternate research traditions, it is necessary for good scholarship, given the impact of the feminist perspective on postpartum affective disorders, to recognise, albeit briefly, this research tradition.

The feminist perspective on postpartum affective disorders, developed by feminist sociologists and social psychologists has largely been based on qualitative accounts of mothers' experiences of post-natal depression (Oakley, 1980; Calvert, 1985; Jebali, 1993; Nicolson, 1986/1998; Ussher, 1989; Romito, 1990; Mauthner, 1998). It has been argued that the prevailing medical model, in which post-natal depression is viewed as individual pathology, is inappropriate because it obscures the socio-political context of womens' distress. Given that context, in which women experience inferior social status and ubiquitous structural constraints (increasing medicalisation of childbirth, loss of occupational status and identity associated with mothering and gendered divisions of household labour), it is argued that depression is a

normal response. In fact, as noted by Mauthner (In Press) feminist scholars "...regard the label 'postnatal depression', which suggests individual pathology and abnormality, not only as inappropriate but as a form of social and medical control, and argue that it should be abandoned in favour of terms such as 'unhappiness following childbirth' ".

While recognising the enormous contribution feminist scholars have made in this research area (particularly in drawing attention to the effects of the socio-political environments on mental health), it is essential to question two fundamental conclusions arising from their work. There appears to be some confusion in this tradition between the recognition of feelings of low mood and/or emotional lability and ambivalence in the post-natal period and the experience of clinical depression. These experiences differ widely (as noted by Elliott, 1994) and while the former range of emotions may constitute a normal response to a significant life-event, the later experience is clearly more debilitating and more rare. As stated by Mauthner (In Press) "...The notion that depression is a 'normal' response to childbirth and motherhood neglects the fact that not all mothers become depressed following childbirth and not all feelings of low mood or ambivalence constitute 'clinical depression', or the extreme feelings that this term is used to connote." Interestingly (and ironically), through failing to recognise obvious diversity among womens' experiences of childbirth, the feminist position implicitly supports the medical model: childbirth and motherhood are pathogenic and inherently depressing events (Smith, 1992).

Further, the current feminist analysis of the socio-political context in which women live appears to define women as essentially passive victims of social and, in this instance, medical control. This analysis fails to consider ways in which women construct personal social and political worlds and the means through which they negotiate and resist the prevailing social context (Mauthner, 1998). As the socio-political context does not change, how then, from this perspective, do women who have become "unhappy following childbirth"

become less unhappy and, in fact, recover? How do some women avoid becoming significantly "unhappy" in the post-partum period at all? Clearly, a more detailed analysis of the dynamic interaction between women and their socio-political context is required.

VI. FATHERS AND POSTPARTUM AFFECTIVE DISORDERS

1. THE IMPACT OF MATERNAL POSTPARTUM AFFECTIVE DISORDERS ON FATHERS

There is evidence to suggest that people living with individuals experiencing psychiatric disorder are, themselves, frequently psychologically distressed (Kuipers, 1992). Two studies have systematically investigated the psychological well-being of partners of women with postpartum psychiatric illness (Harvey and McGrath, 1988; Lovestone and Kumar, 1993). In the study by Harvey and McGrath (1988), results indicated that 42% of partners of women admitted to a mother and baby unit met diagnostic DSM-III-R criteria. The study by Lovestone and Kumar (1993) attempted to replicate these findings and to extend investigation by comparing a sample of partners of women with puerperal illness (n=24) with a sample of partners of women with non-puerperal illness (n=9) and a third sample of partners of well mothers (n=28). Assessment of disorder was based on responses to the GHQ (Goldberg and Williams, 1988), structured interviews and formal diagnostic criteria (Spitzer et al, 1978).

The results indicated that 12 (50%) of the partners of women experiencing puerperal illness were experiencing psychiatric disorder, as opposed to 3 (33%) of the partners of women with non-puerperal disorders. This finding may suggest the deleterious and cumulative impact of psychiatric illness in a spouse in addition to the burdens of new parenthood. Alternately, as there was evidence of previous psychiatric disturbance among 38% of fathers whose

partners were experiencing puerperal disorders, the findings may also support the notion of assortative mating (suggesting that people with psychiatric disorder intermarry more often than by chance [Merikangas, 1982]). However, in considering the timing of onset of disorder among these fathers (subsequent to disorder in the mothers) and the severity of the current episode, Lovestone and Kumar (1993) argued that the fathers appeared to be experiencing psychological distress in response to the distress exhibited by the mothers. There is a significant limitation in this study as a result of the very small sample size.

2. CLINICAL SYMTOMATOLOGY AMONG FATHERS DURING THE TRANSITION TO PARENTHOOD

There is evidence, from a variety of sources, suggesting that at least some men experience psychological disequilibrium in association with childbirth (Marks and Lovestone, 1995). Mild depressive/anxious episodes have been reported in prospective studies by Dewi-Rees and Lutkins (1971) and Atkinson and Rickel (1984). Ballard et al (1994) suggested that 9% of a sample of fathers (n=200) met criteria for caseness (per the EPDS [Cox et al, 1987]) at six weeks post-natally and that at six months post-natally, 5.4% were identified as cases. Further, it was noted that fathers with depressed partners were at greatest risk of depressive symptomatology. (Available data suggest that the life-time prevalence rate, per 100 persons in the general population, is approximately 5.8% for major depression [Atkisson and Zich, 1990]).

Shereshefsky and Yarrow (1974) suggested that approximately 65% of expectant fathers reported minor physical symptoms in addition to mild feelings of distress/discomfort. Case reports (Freeman, 1951; Wainwright, 1966; Ginath, 1974; Shapiro and Nass, 1986) have identified individual men who have experienced more severe mental difficulties, including the couvade syndrome (defined as unintentional acquisition of symptoms by the father as a

reaction to his wife's pregnancy [Wolkind, 1981]). Rettersol (1968), in a survey study, indicated that 2% of male first admissions to hospital with paranoid psychosis were associated with childbirth. In considering men with pre-existing histories of mental ill-health, Davenport and Adland (1982), reported a perinatal relapse rate of 50% for men with histories of bipolar disorders (with half of these occurring during pregnancy).

In a qualitative study examining the psychological adjustment of new fathers (n=22) during the early transition to parenthood, Henderson and Brouse (1991) noted that the first post-natal weeks were very difficult for new fathers and were associated with feelings of sadness, ambivalence and anxiety. The transition was characterised as a lonely one and Henderson and Brouse (1991) observed "...They seemed to have no resources, no one to turn to for the support needed to help them work through what are, after all, quite predictable feelings of adjustment " (p.297).

Dewi-Rees and Lutkins (1971), in a study based on the use of the BDI (Beck et al, 1961) and with a sample of 99 mothers/77 fathers, indicated that 10% of fathers demonstrated at least mild depression during pregnancy and that 13% of fathers indicated similar symptomatology in the post-natal period. Atkinson and Rickel (1984), in a study with 78 mothers/78 fathers and, again, based on the BDI (Beck et al, 1961), reported identical findings among fathers during the post-natal period to those reported by Dewi-Rees and Lutkins (1971). Interestingly, Atkinson and Rickel (1984) argued that the likelihood of depression among fathers was related to unrealistically positive expectations regarding the early parenting experience. Ballard et al (1994) suggested that depressive symptoms experienced by fathers in the postpartum period were less severe than those experienced by mothers.

More recently, Deater-Deckard et al (1998), with a sample of 6,667 fathers drawn from a variety of family structures (traditional families, families where the father was a step-father, etc.), reported that 3.5% of their sample demonstrated

caseness scores on the EPDS (Cox et al, 1987) at eighteen weeks gestation while 3.3% of the sample demonstrated caseness at eight weeks postpartum. (These rates are lower than those reported by Ballard et al [1994] with a considerably smaller and more homogenous sample.) Interestingly, there were significant differences in rates of caseness among differing family structures, with fathers living in step-families experiencing significantly higher levels of depressive symptomatology than fathers in traditional families. However, "...Stepfathers' higher levels of depressive symptoms were associated with higher rates of depression among their partners, less education, more life events, less social support, smaller social networks and more aggression with their partnerships " (p.821).

In examining patterns of depressive symptoms in first-time parents during the pregnancy/early parenting experience, Raskin et al (1990), in a study with a sample of 86 couples and in which depressive symptomatology was assessed with the CES-D Scale (Radloff, 1977), noted that 14% of fathers were depressed during pregnancy (measured at 34 weeks gestation) and that 16% of fathers were depressed in the postnatal period (measured at 8 weeks postpartum). In this study, the authors observed that when one partner was dysphoric, the other partner was unlikely to be similarly affected. Raskin et al (1990) stated: "This pattern can be called complimentary, with spouses balancing divergent levels of depressive symptoms during the period studied" (p.659). However, Ballard et al (1994), who measured depressive symptomatology in both men and women at six weeks postpartum and six months postpartum, reported that fathers were significantly more likely to be "cases" at either measurement point if their partners were. The divergent findings in these studies are difficult to assess as different measures/measurement intervals were employed in each study.

VII. CONCLUSIONS

Psychological morbidity, as defined in symptomatology or as a syndrome within the context of the medical model, appears to be a feature of the transition to parenthood for a significant minority of parents. Although severe psychotic illnesses appears to occur relatively infrequently, clinical depressive episodes, which may range from mild to severe, and to a lesser degree, clinical episodes of anxiety, appear more commonly for both men and women.

The aetiology of postnatal affective disorders continues to be a somewhat contentious area of debate. On the basis of this literature review, there is evidence to suggest that the most severe but least common postnatal affective disorder, puerperal psychosis, may be related to a biological pre-disposition, and that the more ubiquitous baby blues and a minority of severe depressive episodes may be related to biological changes associated with the birth process. However, the largest proportion of postnatal depressive episodes appear to be associated with the same variables that predict non-postpartum depressions: relationship/marital difficulties, low social support, life stress and previous episodes of depression. Lee (1997), has argued, therefore, that the antecedents of the majority of postnatal depressions exist within the social expectations and demands of parenting, rather than "...in any individual physiological or psychological deficit" (p.97).

Whiffen (1991) has stated that symptom severity constitutes the only difference between postpartum depressions and non-postpartum depressions, with the former being of milder severity than the latter. She argues that the elevated rates of depression observed in the postpartum period (as opposed to other periods of women's lives) are, therefore, artefactual and simply reflect expected response to a significant life change, particularly evident among those who have responded to similar events with depressive symptoms. In conclusion, Whiffen (1991) suggests that the construct "postpartum depression" is of as little utililty as constructs like "post-retirement depression"

or "post-divorce depression". While "de-medicalising" depression in the postpartum period, this analysis recognises the very real presence of significant symptomatology inherent in depressive difficulties experienced by a proportion of women and may provide a useful framework for considering affective difficulties occurring at this time.

When the caseness incidence and prevalence of psychological morbidity occurring during the postpartum period is considered in addition to the non-caseness relationship dissatisfactions experienced by, especially, first time parents during this period, the rationale for appropriate education and support for prospective parents, first suggested in Chapter One, is further strengthened. As stated by Lee, (1997): "...While antenatal classes and self-help materials are already abundant, these usually restrict themselves to the physical side of pregnancy and birth, and with few exceptions, are silent about the arguably more difficult personal and relationship adjustments which are necessary after the birth of the baby " (p.104).

The next question must be: what, if any, attempts have been made to prepare new parents for the psycho-social transition to parenthood and what findings has this research yielded? Chapter Three will consider these questions.

CHAPTER THREE

PREPARING FOR PARENTHOOD: PSYCHO-SOCIAL INTERVENTIONS

I. INTRODUCTION

Intervention programmes focussed on issues surrounding the preparation for parenthood may be considered across three broad complimentary areas of interest: a) preparation for decision making regarding the desirability/timing of pregnancy (Prochaska and Coyle, 1979; Potts, 1980; Kimball and McCabe, 1981; Daniluk and Herman, 1984); b) preparation for labour and delivery (Dick-Read, 1959; Davis and Morrone, 1962; Entwisle and Doering, 1981; Markman and Kadushin, 1986); and, c) preparation for the psycho-social transition to parenthood (Caplan, 1951; Shereshefsky and Yarrow, 1974; Neumann, unpublished manuscript; Aranoff and Lewis, 1979; Myers-Walls and Sudsberry, 1982; Clulow, 1982; Meeker, unpublished manuscript; Cowan and Cowan, 1987; Alexander, unpublished manuscript; Parr, unpublished manuscript). Of these areas, preparation for the psycho-social transition to parenthood has received relatively little attention (Duncan and Markman, 1988), in spite of demands for effective intervention programme development by multi-disciplinary researchers (Tomlinson, 1987; Belsky and Pensky, 1988, Terry et al 1991; Lee, 1997) and parents themselves (Coombes and Schonveld, 1992).

Where intervention programmes have been developed, models of promotion of mental health/prevention of disorder have provided a theoretical rationale: either the promotion of psychological well-being and/or the prevention of psychological maladjustment (defined in terms of the parental relationship/individual psychological functioning) during the transition to parenthood has been an implicit or explicit outcome goal (Duncan and Markman, 1988). In order to offer a context, therefore, in which to critically examine intervention programmes specifically focussed on the psycho-social transition to parenthood, this Chapter will begin by defining the promotion of mental health/prevention of disorder as fields of practice.

II. PREVENTION OF DISORDER/PROMOTION OF WELL-BEING IN MENTAL HEALTH

As strictly defined, to promote is to "...encourage the progress or existence of..." (New Collins Concise Dictionary of the English Language, 1982, p.910); to prevent is to: "...keep from happening, especially by taking precautionary action" (New Collins Concise Dictionary of the English Language, 1982, p.900). When applied to mental health, promotion considers "...movements toward positive health" (Tudor, 1996, p.58) and "...encompasses matters of individual as well as collective well-being and optimal states of wellness" (Mrazek and Haggerty, 1994, p.334). In contrast, prevention seeks to reduce risks associated with mental disorder, itself defined by several possible outcomes, including "...first incidence, relapse, disability associated with disorder, or the risk condition itself..." (Mrazek and Haggerty, 1994, p.19). Although considered as component parts of the same broad field, promotion and prevention in mental health have been characterised as differing, and in some ways, competing paradigms (Kuhn, 1970; Tudor, 1994).

1. PROMOTION OF MENTAL HEALTH

Generic health promotion is defined as "...the process of enabling individuals and communities to increase control over the determinants of health and of disease and thereby to improve their health (Health Education Authority, 1977, p.9). It is seen as a composite of health education, health protection and prevention activities (Tannahill, 1985; Downie et al, 1990). In this context, the generally accepted definition of health is that offered by the World Health Organisation (1946) "...a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" (p. 5).

Mental health promotion has been defined as "...any activity which actively fosters good mental health, through increasing mental health promoting factors, such as meaningful employment and decreasing those factors which damage

or reduce good mental health, such as abuse and violence" (Health Education Authority, 1997, p.9). In this context, the definition of "good mental health" is a problematic construct. In Great Britain, although the conceptualisation of mental health is a dominant theme in mental health promotion, there has been little consensus on a standard definition (Tudor, 1994; Trent, 1997; Money, 1997). In fact, Money (1997) has argued, "...The notion of some conclusive and final definition of mental health is illogical as well as impossible" (p.15). Increasingly, in the British literature, there is a tendency to replace the concept of mental health with a more general concept of emotional well-being (MacDonald and O'Hara, 1998; Health Education Authority, 1997). The important consideration, however, is, as stated by Mrazek and Haggerty (1994), that "...mental health promotion activities are offered to individuals, groups, or large populations to enhance competence, self-esteem, and a sense of well-being rather than to intervene to prevent...mental disorders" (p.334).

The theoretical framework for mental health promotion explicitly relies on a psycho-social model, with biological, psychological and social factors recognised as determinants of well-being/mental health (Tudor, 1994). A number of theoretical constructs inform mental health promotion literature and practice, including, concepts like social competence (Slaughter, 1983; Berrueta-Clement et al, 1984), self-efficacy and empowerment (of both individuals and communities) (Rappaport, 1981) and self-esteem (Goldschmidt, 1974). The concept of self-esteem has, as stated by Mrazek and Haggerty (1994), "...attained considerable importance in the thinking that informs mental health promotion efforts" (p. 336). The dynamic relationship between individual efforts to maintain and develop positive self-esteem and the institutional means by which societies facilitate or hinder this process has been considered by theorists like Antonovsky (1979) and Mechanic (1986).

Practice in mental health promotion, which includes elements of health education, protection/maintenance of well-being and prevention of disorder, is directed across a variety of settings (from the domestic to the community environment), levels of action (from individually-based activities to whole-

population strategies) and life stages (infancy to old age) (Tudor, 1994; Ross, 1996; Health Education Authority, 1997).

The broad goals of mental health promotion remain an area of contention in Great Britain (Tudor, 1994). The debate centres on the degree to which mental health promotion should be exclusively concerned with well-being (Trent, 1997; Money, 1997). In essence, the role of prevention of disorder within a mental health promotion framework remains in dispute (Hosman, 1994). However, in practice, within the National Health Service, both the promotion of well-being and the prevention of disorder are identified goals for mental health promotion and are delivered through activities and interventions which are both health and non-health based. "Good housing, having a job, access to services and buildings, activities which are directed to promoting health generally, such as family planning, sexual health and CHD [Coronary Heart Disease] programmes, as well as services directly targeted at the primary prevention of mental health problems are all able to deliver benefits for mental health" (Health Education Authority, 1997, p.9)

Research on mental health promotion initiatives is relatively limited (Trickett, Dahiyat and Selby [In Press]). As noted by Mrazek and Haggerty (1994), "...The current level of understanding about the potential contribution of conventional and alternative approaches to the goals of mental health promotion is sparse" (p.349). Two recent mental health promotion effectiveness reviews conducted in Great Britain (Hodgson and Abbasi, 1995; Tilford et al, 1997) have almost exclusively cited randomised controlled studies published in peer-reviewed journals drawn from a prevention paradigm. It is interesting to note that explicit mental health promotion initiatives are rarely published in academic outlets.

As noted by the Health Education Authority (1997): "...Much of the work on effectiveness in mental health promotion has not been widely disseminated and there are few examples based on UK initiatives. In particular, interventions involving social and environmental change are poorly represented, as there has been little research in this area" (p.16). In spite of this considerable caveat, it

has been argued that a range of approaches, including social skills/assertiveness training, relationship/communication/coping skills development and social support initiatives "...have been found to be effective" (Health Education Authority, 1997, p.17).

2. PREVENTION OF MENTAL DISORDER

Government initiatives in the U.S.A. in the mid-fifties, which led to the establishment of community mental health facilities and programmes of de-institutionalisation, served to direct the attention of mental health professionals to the potential of preventative approaches (Felner et al, 1983b). Psychologists subsequently embraced the notion of prevention and in 1965, at a Conference held in Swampscott, Massachusetts, "Community Psychology" was born (Felner et al, 1983b). Prevention was seen as a primary concern for Community Psychologists and the goals of preventative psychology were defined as "...optimal development, reduction of environmental hazards, avoidance of maladaptation, and enhancement of coping skills and ability...." (Felner et al, 1983b, p.6). In Great Britain, Community Psychology, as a specialist area of practice, is in early development (Ross, 1995; Bostock, 1998).

To seek to prevent mental disorder is to define a concept of mental ill-health. The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) defines mental disorder as a "...clinically significant behavioural or psychological syndrome or pattern that occurs in a person and that is associated with present distress or disability, or with a significantly increased risk of suffering death, pain, disability or an important loss of freedom" (DSM-IV, p.xxi).

Traditionally, prevention in mental health was conceptualised across three levels of intervention: a) primary prevention, or the prevention of the incidence of disorder, b) secondary prevention, or the early identification and early treatment of disorder, and, c) tertiary prevention, or the prevention of residual

effects of disorder through effective rehabilitation (Bloom, 1984). This "battle-weary" typology (Orford, 1992), based on a Public Health model of medical disorders, has been the subject of frequent criticism in its application to mental disorders. In response to these criticisms, the Committee on Prevention of Mental Disorders (U.S.A.) has recently presented an alternative model of classification (Mrazek and Haggerty, 1994). This model identifies prevention as part of a spectrum (including treatment) of interventions for mental disorders.

In this model, prevention is defined under three headings: a) universal preventative interventions: interventions targeted to the general public/whole populations and not just people who may be considered "at risk" for some reason (ie: programmes aimed at preventing distress/divorce in married couples not yet experiencing marital difficulty); b) selective preventative interventions: interventions targeted to individuals/sub-groups of the population whose risk of developing mental disorder is considered higher than average on the basis of psychological, social or biological risk-factors (ie: programmes aimed at pre-school children in socially deprived communities); c) indicated preventative interventions: interventions targeted at high-risk individuals with minor symptoms of mental disorder (ie: programmes for children identified by parents as exhibiting behavioural problems) (Mrazek and Haggerty, 1994).

Cowan (1986) has identified two main strategies on which most preventative research is established: person-centred strategies and systems-levels strategies. Person-centred strategies include situation-focussed approaches (which consider the relationship between life-events/stressful situations and psychological distress) and competence-enhancement approaches (which attempt to provide opportunities to acquire improved abilities to strengthen adaptive capacities). Systems-levels strategies maintain that "...informed social action, policy change, and reform based on concepts such as justice, empowerment and the provision of life opportunities are the real keys to achieving prevention's basic goals" (Cowan, 1986, p.6). Cowan argues that both approaches are "...needed and are important strategies...are complimentary...not antagonistic" (Cowan, 1986, p. 9).

There is a growing research base in the prevention paradigm. Mrazek and Haggerty (1994) have observed that: "...At present, there are many intervention programmes that rest on sound conceptual and empirical foundations, and a substantial number are rigorously designed and evaluated. From a mental health perspective, these interventions are consistent with - even though they do not prove - the hypothesis that serious psychological problems can be avoided by preventive action before the onset of a diagnosable disorder" (p.215). Studies have, for example, focussed on child development (Johnson, 1991), parent-child interactions (Strayhorn and Weidman, 1991), interpersonal cognitive problem-solving (Shure and Spivack, 1982), adult relationship enhancement (Markman, 1984), care-giver support (Heaney, 1992) and widow/widower support (Silverman, 1988).

General findings have suggested that although preventative interventions can reduce risk factors associated with the initial onset of a variety of mental disorders, there is no evidence to suggest that these interventions reduce the incidence of disorder (Mrazek and Haggerty, 1994). Further, although a variety of interventions across the life-span have demonstrated efficacy, "...there is usually no single intervention at a single point in time that accomplishes comprehensive goals of prevention for a lifetime" (Mrazek and Haggerty, 1994, p.298).

In summary, there is evidence to suggest the efficacy of proactive initiatives in mental health. However, mental health promotion and the prevention of disorder in mental health may be viewed as differing, and in some ways, competing paradigms. The relationship between these paradigms has been the source of long-running debate (particularly in Great Britain) and the issue of primacy between these approaches has often been the focus of that debate. Interestingly, what in theory is irreconcilable, is in practice and, potentially, outcome, less so. Arguably, to "prevent" is, at least on some level, to "promote". Further, the technology of either pursuit, often employing cognitive or behavioural methods (or both), is frequently held in common. At the level of community development, there is considerable complimentarity between "systems level strategies" in prevention and the aspirations of mental health

promotion to societal/structural change. While it is vital that the clarity of each paradigm be maintained, the primacy of one paradigm over the other is of little importance, particularly in the current NHS environment where few resources are available for non-treatment based initiatives in mental health of any description (Hosman, 1994; Ross, 1998).

III. INTERVENTION STUDIES

The majority of intervention programmes focussed on the psycho-social transition to parenthood have been developed within a mental health promotion paradigm (Caplan, 1951; Shereshefsky and Yarrow, 1974; Neumann, unpublished manuscript; Aranoff and Lewis, 1979; Myers-Walls and Sudsberry, 1982; Clulow, 1982; Meeker, unpublished manuscript; Cowan and Cowan, 1987; Alexander, unpublished manuscript; Parr, unpublished manuscript). By definition, these interventions have attempted to promote psychological well-being among individual parents/couples during the transition to (usually) first-time parenthood and have sought to understand '...what it is that people must do, cognitively or behaviourally, to achieve satisfactory levels of adaptation to the new circumstances in their life resulting from events and the transitional tasks they precipitate' (Felner et al, 1983a, p.209).

Alternately, a minority of interventions in the area have been developed within a prevention paradigm and have either aimed to prevent generic emotional distress during the transition to parenthood (Gordon and Gordon, 1960; D'Andrea, 1984) or have specifically targeted the prevention of post-natal depression (Elliott et al, 1988; Brugha et al, unpublished manuscript; Reid et al, unpublished manuscipt). These studies will be considered in more detail later in this Chapter.

Within both paradigms, the interventions can be loosely grouped according to those based on an educational model of intervention, and those based on a counselling model. (Elements of both interventions may be present in the same study.) Educational models of intervention have attempted to provide didactic

instruction on the social/psychological changes associated with parenthood, usually followed by structured question-and-answer discussions. Alternatively, counselling models of intervention have sought to provide "... an adequately supportive emotional environment" (Shereshefsky and Yarrow, 1974, pg.2), for the mother/couple in which an exploration of social/psychological change during the transition to parenthood has been facilitated.

Intervention programmes will be described individually, following which, a general critique of this work will be offered. Table 3.1 provides summary information (country of origin of study [BASE], number of participants, examples of measurement indices employed, etc.) on each intervention programme, arranged in chronological order.

TABLE 3.1

Intervention Studies in the Psycho-Social Transition to Parenthood

STUDY	BASE	N	PRIMA/ MULTI	CONTROL GROUP	MEASURES	SESSIONS	FOLLOW-UP
Caplan (1951)	Israel	Unknown	Both	No	• Unknown	5-6	Unknown
Gordon/ Gordon (1960)	USA	157 couples	Unknown	Yes	• Questionnaires • Independent Rating	2 pre-natal	6 weeks post-natal
Shereshefsky/ Yarrow (1974)	USA	60 couples	Prima	Yes	• Unstructured Interview • Projective Tests	Bi-Weekly: 3-9 ms pre-natal; Monthly: 3-9 ms post-natal	6 months post-natal
Neumann (unpublished)	USA	98 couples	Prima/ Multi	Yes	• BDI • Stait/Trait Scale • DACL • Marital Adjustment Test	4 pre-natal	1 month post-natal
Aranoff/ Lewis (1979)	USA	48 Couples	Prima	No	• Unknown	8 pre-natal	Unknown
Clulow (1982)	UK	42 Couples	Prima	No	• Anecdotal discussion	6; pre/post-natal	Unknown

TABLE 3.1 (Cont.)

STUDY	BASE	N	PRIMA/ MULTI	CONTROL GROUP	MEASURES	SESSIONS	FOLLOW-UP
Myers-Walls/ Sudsberry (1982)	USA	Unknown	Prima/ Multi	No	• Unknown	10 post-natal	Unknown
Meeker (unpublished)	USA	38 women	Prima	Yes	• BDI • DACL	4 pre-natal	3 weeks post-natal
D'Andrea (1984)	USA	60 girls	Prima	Yes	• Washington University Sentence Comp. Test • Pattison Psycho-Social Inventory Scale	8 pre-natal	Unknown
Cowan/ Cowan (1987)	USA	95 couples	Prima	Yes	• Marital Adjustment Test • Who Does What? • Qualitative Observations	25 pre/post-natal	18 ms post-natal
Elliott et al (1988)	UK	188 women	Prima/ Multi	Yes	• Crown Crisp • Present State • EPDS	11 pre/post natal	2 months post-natal

TABLE 3.1 (Cont.)

STUDY	BASE	N	PRIMA/ MULTI	CONTROL GROUP	MEASURES	SESSIONS	FOLLOW-UP
Alexander (Unpublished)	UK	59 women	Both	Yes	• BDI • EPNDS	1 pre-natal	8 wks post-natal
Parr (Unpublished)	UK	106 couples	Prima	Yes	• Interview • Standard/Devised Questionnaires	14 pre/post-natal	6 ms post-natal
Brugha et al (Unpublished)	UK	289 women	Prima	Yes	• GHQ • EPDS	6 pre-natal	3 ms post-natal
Reid et al (Unpublished)	UK	1010 women	Prima	Yes	• EPDS	8 post-natal	6 ms post-natal

1. EDUCATIONAL INTERVENTIONS

Caplan (1951) designed one of the earliest published educational interventions. This intervention, although based on a group-psychodynamic model, was operationalised through a lecture/discussion format. Caplan targeted both prima/multiparae mothers, and the intervention was developed as an adjunct of existing medical ante-natal services.

Expectant mothers attended brief lectures followed by discussion periods. Lecture topics covered a range of issues: mood change during pregnancy, fantasies/anxieties concerning foetal development and the birth process, the marital relationship, breast-feeding and child development. The intervention was not empirically evaluated. However, Caplan reported that it was useful in reducing emotional tension in "normal" expectant mothers and in identifying mothers with significant emotional disturbance.

Gordon and Gordon (1960) attempted an empirical evaluation of an early preventative intervention. Participants in the study were matched and randomly divided into two experimental groups (n=85) and two control groups (n=76). In both the experimental and control groups, both parents were assigned to one group, while mothers-only were assigned to the other. The experimental intervention consisted of two forty-minute instruction periods, added to existing ante-natal education classes. The instruction periods consisted of formal talks in which a range of prescriptive information points were presented. These points included advice on parental relationship enhancement and household management.

Subjects were rated 6-8 weeks post-natally by Obstetricians "blind" to the study. The results indicated that participants in the experimental groups experienced significantly less "...postpartum emotional upsets " (Gordon and Gordon, 1960, p.435) than control participants. Further, there was less emotional disturbance among mothers in the couples experimental group than among mothers in the mothers-only experimental group. The authors reported that behavioural changes reported by participants significantly discriminated

between those experiencing emotional disturbance and those who did not. For example, couples who did not experience emotional disturbance were more likely to make friends with other new parents, gave less emphasis to domestic tidiness and were couples in which the father became more available within the home.

In two unpublished theses, (Neumann, unpublished manuscript; Meeker, unpublished manuscript), "Anticipatory Guidance" formed the basis of an educational intervention. As stated by Brown (1979), Anticipatory Guidance "...is the cornerstone of comprehensive and preventive pre-natal psychological care..." (p.2), and is defined by three related processes: a) the provision of factual information, b) the anticipation of psychological reactions to pregnancy, birth and the post-natal period, and, c) the mobilisation of coping responses.

In the Neumann (unpublished manuscript) study, which was directed at couples, experimental intervention consisted of four sessions. Follow-up was conducted at three days and one month post-natally with standard measures, which included the BDI (Beck et al, 1961), the STAI (Spielberger et al, 1970) and the Marital Adjustment Test (Locke and Wallace, 1959). There were no significant differences observed between the experimental group (n=50) and the control group (N=48) at either follow-up measurement point.

In the Meeker study (unpublished manuscript), which was directed to expectant mothers only, participants were randomly assigned to: a) a structured treatment group ("directed" Anticipatory Guidance), b) an unstructured treatment group ("non-directed" Anticipatory Guidance), or, c) a control group. This intervention also consisted of four sessions, the first three of which were restricted to mothers, while the fourth session was restricted to fathers. Follow-up was conducted at 21 days post-natal with standard measures including the BDI (Beck et al, 1961) and the Depression Adjective Checklist (DACL) (Lubin, 1965). At follow-up, significant differences were observed on the DACL only: expectant mothers in the experimental group (n=24) demonstrated lower scores on the DACL than mothers in the control group (n=14).

In another unpublished study, Alexander offered education on mood change during pregnancy and in the post-partum period in single, brief (one half-hour) sessions. Mothers were randomly allocated to three experimental conditions based on the timing of the intervention: a) pre-natal, b) post-natal, or, c) both pre and post-natal. Follow-up was conducted at 8 weeks post-natal with standard measures including the BDI (Beck et al, 1961) and the EPDS (Cox et al, 1987). At follow-up, there were no significant differences observed among experimental groups (n=44 women) or between the experimental groups and the control group (n=15 women).

Aranoff and Lewis (1979), directed their intervention to the parental relationship. Small groups of couples (n=6) attended eight lecture-demonstration sessions. The objectives of the intervention were: a) to provide information concerning pregnancy and parenthood, b) to facilitate parental communication, and, c) to facilitate parental problem-solving. There were no control groups and evaluation was based solely on anecdotal evidence. However, the authors concluded that "...the need for preparation for parenting experiences is great in our society today, as the family becomes smaller and pregnant couples do not have the support groups and resources available to them as in previous generations" (Aranoff and Lewis, 1979, p.55).

The "Family Enrichment for New Parents" programme was described by Myers-Walls and Sudsberry (1982), as a "... packaged programme guide for experienced leaders to use with groups of new parents" (p.55). The programme, specifically established for use with couples in the post-partum period, sought both to assist parents in examining changes within their own relationships and to provide opportunities for enhancing parenting skills. Designed across ten sessions, the programme was intended for both first-time and "experienced" parents. Although the available literature suggests the need for evaluation, evaluative data were not reported.

Studies by Elliott et al (1988), D'Andrea (1984) and Brugha et al (unpublished manuscript) differ significantly from the preceding studies in that they specifically targeted "at risk" populations among prospective mothers.

Similarly, Reid et al (unpublished manuscript) conducted a recent study with primaparae mothers in which the prevention of post-natal depression was a central aim. These studies were, as noted earlier, developed within a prevention paradigm.

The study by D'Andrea (1984) is cited in this Chapter as an example of a series of studies in parenthood preparation for pregnant adolescents. D'Andrea (1984) attempted to prevent maladaptation among African American adolescent mothers. Participants were randomly allocated to a treatment group (n=30) or a control group (n=30). The treatment included both educational (eight pre-natal classes) and counselling components. At follow-up, there were significant differences between groups on measures of perceived social support (with treatment participants perceiving psycho-social networks as stronger, more elaborated and more responsive).

This study and other studies among this population (Kaufman and Deutsch, 1967; Davis and Grace, 1971; Kolodny and Reilly, 1972; Ryan and Sharpe, 1975; and Adams et al, 1976) represent a 'special-case' sub-group among studies in the preparation for parenthood literature. As stated by Ryan and Sharpe (1975): "The pregnant school-age girl represents a high-risk group from the point of view of her medical, social and educational needs. When pregnancy is super-imposed on the adolescent developmental tasks, the rate and intensity of psychological and social changes are over-whelming to the girl" (p.264). Kolodny and Reilly (1972), Adams et al (1976), Kaufman and Deutsch (1975) and Ryan and Sharpe (1975) describe group therapy (counselling) models of intervention with this population. However, these studies will not be reviewed in detail in this Chapter, as the issues surrounding adolescence and parenthood, arguably, form a topic for specific review in a differing context from the adult studies reviewed here.

The primary aim of the study by Elliott et al (1988) was to reduce the prevalence of post-natal depression among first and second-time mothers. It was Elliott's view that an effective programme should include, in addition to social support, several inter-related components. "...First, there should be

continuity of care, from pregnancy to the puerperium, from at least one empathic professional. Second, there should be an educational component covering at least three aspects: post-natal depression, the common 'realities ' of life with a new born and ways of preparing for the new (or changed) 'job' of parenting. Finally, the programme should act as a source of information on, or referral to relevant local and national organisations" (Elliott et al 1988, p.92).

"Vulnerable" women were identified on the basis of selected risk factors for post-natal depression (poor marital relationship, personal psychiatric history, absence of a confidante and high anxiety levels) and randomly allocated to intervention (n=48) and non-intervention groups (n=51) (with separate groups for prima/multiparae mothers). Additionally, there was a non-vulnerable control group (n=89).

The intervention was conducted with small groups, in eleven monthly sessions, extending from four months pre-natally to six months post-natally. At two-months follow-up, significantly fewer women in the intervention group (including both first-time/second-time mothers) than in the control group received a diagnosis of depression over a period of two weeks or more (as defined by Present State Examination ratings [Finlay-Jones et al, 1980]). In the intervention group, 12% of the women received a diagnosis of depression; in the control group, 33% of the women received a diagnosis of depression. In assessment at three months post-natal, it was reported that "...differences were in the same direction but not statistically significant" (Elliott et al, 1988, p.106), especially for first-time mothers. Second-time mothers, however, demonstrated a higher prevalence of depression at three months post-natal and there were no significant differences observed between intervention and control groups in this sample.

Brugha et al (unpublished manuscript), in a study conducted in 1996/1997, hypothesised that "...mothers selected in their first pregnancy to be at high risk of post-natal psychiatric disorder [and] randomised to receive a brief intervention designed to reduce deficits in social support, will have a significantly lower prevalence of symptoms of post-natal depression in the three

months after childbirth compared to control group mothers receiving standard ante-natal care" (p.7). On the basis of a questionnaire (devised in an earlier study [Brugha et al, 1998]) administered at twenty weeks gestation, primiparous women "at risk" of postnatal depression were identified in the ante-natal period and randomly allocated to experimental intervention (n=100), to a control group (n=106) or to a group unwilling to enter the study, but agreeing to a post-natal interview at follow-up (three months post-natal) (n=83). In the experimental intervention, women attended a structured group, over six sessions, conducted by Course Leaders and "...based on principles of social support and problem solving" (Brugha et al [unpublished manuscript], p.7). The attrition rate in the intervention sample was reported as 55%. Outcome measures included the EPDS (Cox et al, 1987) and the General Health Questionnaire (Surtees and Miller, 1990). There were no significant differences among conditions observed at three-months post-natal.

Reid et al conducted a two-centred (Aberdeen and Ayrshire) randomised controlled trial of two forms of post-natal support (n=1010 primiparous women) which included both educational and social-support components. The aims of the study were: a) to ascertain the benefits of providing post-natal support for women's physical and psychological health during the early post-natal months, and, b) to ascertain the health service benefits from the provision of these additional support measures. The study was also conducted in 1996/97.

There were two interventions employed in the study and participants were randomly allocated to a control condition (n=255 women) or one of three experimental conditions: a) a support group (n=251 women), b) a group receiving a "Post-Natal Support Pack" (n=251 women), or, c) a group receiving both interventions (n=253 women). In the support group condition, women were invited to attend post-natal groups, on a weekly basis, for two-months, early in the post-natal period. The groups were facilitated by a researcher and provided structured information (baby-care, physical/psychological well-being in the post-natal period) and social support. In the condition in which women

received "packs", the Post-Natal Support Pack was posted to participants one month post-natally. The pack included a self-help manual and "...provides information as well as enabling women to admit to feelings and problems they may not understand or be willing to accept (Reid et al, p.1). Outcome measures included the EPDS (Cox et al 1987) and preliminary analysis has indicated that there were no differences among Conditions at three-month or six-months follow-up.

Although a general critical analysis of all the studies reviewed is presented at the end of this Chapter, there are a number of specific issues in the studies by Elliott et al (1988), Brugha et al (unpublished manuscript) and Reid et al (unpublished manuscript) that are worth considering separately. In a sense, these studies, in common with studies focussed on the adolescent mother, represent a "special case" sub-group among transition to parenthood interventions. Each of these studies was focussed on the prevention of post-natal depression, was conducted with women only and used a common measurement instrument (EPDS [Cox et al, 1987]). Further, both the studies by Brugha et al and Reid et al have been conducted very recently (1996/1997). (In fact, preliminary data is only now available for these studies and has been included in this Chapter by special permission of the authors.) It must be acknowledged, however, that each study reflects (either explicitly or implicitly) a specfic theory regarding the complex relationship between aetiological risk factors and the development of post-natal depression (Holden, 1994).

The differences in outcome between the studies by Elliott et al (1988) and Brugha et al (unpublished manuscript) are intriguing as both studies employed somewhat similar intervention models. In the study by Elliott et al (1988), significant effects for the experimental intervention were reported, while in the study by Brugha et al, "...The main result was that this intervention had no clinically relevant effect on postnatal depression" (unpublished manuscript, p.75)

Brugha et al have noted a number of potential theoretical and methodological issues which may have adversely affected their findings. In this study, the authors sought to address four risk factors for post-natal depression identified in their earlier studies (Brugha et al, 1998): increased levels of depressive symptomatology in pregnancy, a negative attitude to an unplanned pregnancy, unsupportive response to the pregnancy from the woman's partner and unsupportive response to the pregnancy from the woman's mother/close others. However, the authors suggested that the design of the intervention may have precluded each factor being addressed with sufficient specificity. For example, they argued that it was difficult, in a group-based setting, to develop discussion around issues of planned vs. unplanned pregnancies with their participants. Further, Brugha et al noted that as 28% (n=82 women) of their participants were Asian, addressing multi-cultural issues was a particular challenge for the research team. Additionally, poor compliance, with only 45% of women in the intervention group completing the study, clearly posed a considerable difficulty.

It may be, as noted by Brugha et al, that the timing of intervention was a crucial factor. Where intervention in the Elliott et al study (1988) was conducted in both the pre and post-natal period, intervention in the Brugha et al study was conducted in the pre-natal period only and "...as such, was not carried out in the defined period of risk i.e. the early postpartum" (p.73). If this conjecture is accurate, the results of the Reid et al study (unpublished manuscript) are, then, particularly interesting. In this study, in which there were no significant differences among intervention/control groups, experimental intervention was conducted in the post-natal period only. Considered collectively, these three studies may indicate the importance of pre-natal and post-natal intervention in the prevention of post-natal depression. It must be noted, however, that there were other conceptual differences among these studies: the study by Reid et al did not attempt to identify mothers at risk of post-natal depression but was, rather, a universal preventative intervention (Mrazek and Haggerty, 1994).

2. COUNSELLING INTERVENTIONS

Shereshefsky and Yarrow (1974) hypothesised that psychodynamic counselling, serving as an adjunct to available ante-natal services, could reduce the stress experienced by first time mothers. The study involved individual counselling for both mothers and fathers during pregnancy and the post-partum period. In the experimental group (n=30 couples), three counselling techniques were employed: a) interpretation, b) clarification, and, c) Anticipatory Guidance, which "...while utilising psychoanalytic understanding, kept clearly in view limitations of time and goals and was closely focussed on psychological preparation for the stresses of pregnancy, delivery and parenthood" (p.156). Pre/post assessment measures included standard interviews and Projective Tests.

A summary of the findings suggested that the experimental group was "... superior to the control group (n=30 couples) on pregnancy-related adaptation, labour and delivery (increased coping) and husband/wife adaptation post-natally" (Shereshefsky and Yarrow, 1974, p.2). Further it was suggested that Anticipatory Guidance was the most effective of the three techniques used in the study.

Clulow (1982) sought to "... enhance the capacity of marriage to contain the tensions and growing pains inherent in the process of adapting to change" (p.45). Six meetings, conducted in the last trimester of pregnancy and the first three post-natal months, were offered to prospective parents and were conducted by Health Visitors and a research team (whose professional backgrounds were not identified).

Intervention (directed/non-directed group participation) was formulated on the basis of a priori decisions regarding psychological need during the transition to parenthood: a) awareness of gains/losses, good/bad feelings precipitated by major change, b) the need for appropriate affective response (worrying, grieving), c) the development of realistic expectations regarding parenting, and,

d) the promotion of communication in relationships. The intervention was not empirically evaluated.

In another study directed toward the parental relationship, Cowan and Cowan (1987) randomly allocated expectant couples among four experimental conditions: a) small groups of couples (n=23) who met weekly on 25 occasions during the last trimester of pregnancy and the first three post-natal months led by trained leader couples, b) couples (n=24) who were interviewed and assessed at the same time as couples in the small groups but who did not participate in the groups, c) couples (n=24) who were also interviewed at the same time but not later assessed, and, d) couples (n=24) who were not expecting a child at the time of the study.

The intervention for couples in the small groups included structured and unstructured discussion, lasting approximately 2.5 hours per session. The rationale for the intervention was based on a model of social support in which the transition to parenthood was viewed from the perspective of the family system. Results were based on both qualitative and quantitative data (including the Short Marital Adjustment Test [Locke and Wallace, 1959] and the Who Does What? Scale [Cowan et al, 1978]). "Positive effects on individual and couple functioning..." (Cowan and Cowan, 1987, p.248) were reported at follow-up at eighteen months post-natally for the participants in the intervention group across five domains of family life: a) sense of self, b) role arrangements, c) couple communication, d) marital satisfaction, and, e) marital stability.

In a similar recent study (conducted between 1989-1993), Parr (unpublished manuscript) aimed to facilitate family and parent-infant relationships with intervention "...focused on a non-directive, developmental and integrative approach to supporting early family and parent-infant relationships" (p.6). Participants were recruited during the ante-natal period and allocated to an experimental intervention group (n=52 couples), or a control group (n=54 couples). In the experimental intervention group, couples participated in weekly group meetings (n= 4/6 couples/group) for eight weeks during the ante-natal period and ten weeks during the post-natal period and received a home or

hospital visit after birth. Groups were facilitated by a male/female pairs of specially trained and supervised Parent-Infant Facilitators. The intervention "...integrated recent advances in systems thinking with developmental theory and humanistic/existential approaches to couple, family and parent-infant communication and relationships" (Parr, unpublished manuscript, p.7). Data collection was conducted with both questionnaires and interviews and reflected a number of dimensions in the transition to parenthood: the individual, the couple and the individual as "parent". Parr (unpublished manuscript) reported that: "...Six months post-natally, adjustments of women and men who had received the interventions were found to be significantly more positive than women and men on the control for various aspects of a) emotional well-being, b) satisfaction with couple relationship, and, c) satisfaction as a new parent and with the parent-infant relationship" (p.2).

IV. CRITIQUE

The intervention programmes reviewed in this paper have exclusively focussed on the psycho-social transition to parenthood. However, within that relatively narrow field of interest, there appear to have been a broad range of conceptual formulations, research designs and research methodologies employed. This variety, which can be construed as demonstrating a breadth of vision in the field, can be explained as a function of the multi-factorial (biological/ psychological/social) nature of this transitional period and the subsequent multi-disciplinary interest engendered. However, there is a negative end-result: in this area there is little basis for comparison among studies which might lead to the development of empirical generalisations, and, importantly, clear recommendations for service planning. This critique will consider the intervention programmes under three headings: conceptual formulation, research design, and research methodology and, finally, will attempt to identify trends in this literature which may suggest implications for future research design.

1. CONCEPTUAL FORMULATION

Among the studies presented in this Chapter, it was generally possible to differentiate interventions primarily based on an educational model from those interventions primarily based on a counselling model. Those interventions based on an educational model appear to have relied on a cognitive-behavioural formulation of problems/solutions during the transition to parenthood, while those interventions based on a counselling model have relied on a psychodynamic formulation of the same phenomena. For example, the interventions described by Gordon and Gordon (1960), Neumann (unpublished manuscript) and Meeker (unpublished manuscript), in which prescriptive lectures were offered to participants in order to assist them in changing dysfunctional attitudes and behaviours during the transition to parenthood, differed significantly from the psychodynamic orientation assumed by Caplan (1951), Shereshefsky and Yarrow (1974), Clulow (1982) or Parr (unpublished manuscript). Given this obvious divergence in fundamental theoretical orientation, it is virtually impossible to compare these interventions in any meaningful way. Further, the preventative interventions designed by Elliott et al (1988), Brugha et al (unpublished manuscript) and Reid et al (unpublished manuscript) form, as noted earlier, a "special-case" sub-group among interventions in the transition to parenthood. Although these studies can usefully be compared among themselves, it is difficult to compare them with interventions from the promotion paradigm.

The possible interaction between disequilbrium in the parental relationship and individual psychological morbidity during the transition to parenthood was fully explored in Chapter Two. As the psycho-social transition to parenthood is broadly defined by psychological and sociological parameters, the unit of analysis (individual psychological functioning/couple functioning) in intervention programmes must be clearly defined. Among the studies presented here, there has often been little clarity regarding the unit of analysis, particularly in relation to experimental intervention and outcome. For example, in the studies by Gordon and Gordon (1960) and Neumann (unpublished manuscript), both of which reflected educational models of intervention, individual maternal

psychological functioning and couple functioning were identified as units of analysis in the experimental intervention. However, only in the Neumann (unpublished manuscript) study was the couple relationship explicitly measured at outcome.

2. DESIGN

The most obvious design issue among these studies concerns the use of control groups. Duncan and Markman (1988) have noted the absence of appropriate control groups in studies in this area. In the studies reviewed here, four studies did not use control groups (Caplan, 1951; Aranoff and Lewis, 1979; Clulow, 1982; Myers-Walls and Sudsberry, 1982) and in many of the remaining studies, information regarding the assignment of participants to control groups was vague or unavailable (Neumann, unpublished manuscript; Meeker, unpublished manuscript). Further, a no-intervention control group (or 'placebo' group) was employed in only three studies (Cowan and Cowan, 1987; Elliott et al, 1988; Brugha, unpublished manuscript). As stated by Duncan and Markman (1988), no-intervention control groups are essential in order to "...delineate mechanisms whereby the effects may be achieved" (p.300).

The number of sessions offered in the intervention programmes and the timing of intervention (pre/post-natally) have varied considerably in the studies reviewed here. Alexander (unpublished manuscript) offered one session in the ante-natal period to expectant mothers; Sheseshefsky and Yarrow (1974) offered bi-weekly sessions to parents over nine months (which included both the ante-natal and post-natal period). Similarly, studies by Elliott et al (1988) and Brugha et al (unpublished manuscript) varied with reference to the timing of intervention during the transition to parenthood.

Variation in the duration of intervention programmes has been a long-standing issue in mental health promotion and there is, as yet, little evidence on which to base decisions regarding optimal programme length (Hosman, 1994). On the basis of the studies considered in this Chapter, there also appears to be little

evidence on which to base decisions regarding the timing of intervention (pre/post-natal/both) during the transition to parenthood (except, possibly, for studies concerned with the prevention of post-natal depression). The current variability in practice is a further confounding issue in the useful comparison of existing research protocols.

A further design issue concerns the timing of follow-up assessment. In the studies reviewed here, follow-up was conducted from three weeks post-natal (Meeker, unpublished manuscript) to eighteen months post-natal (Cowan and Cowan, 1987). As noted in Chapter Two, in relation to research on post-partum affective disorders, early assessment allows researchers to reduce both the financial/human resources required for a study and the potential participant attrition rates. The difficulty with this strategy in the transition to parenthood is that disequilibrium in the parental relationship is more common after the "baby honeymoon" has ended (possibly after month three post-natal) (Belsky et al, 1983) and, further, affective disorders most commonly occur within three to six months post-natal (O'Hara and Zekoski, 1988). This would appear to suggest that a minimum follow-up period must be six months post-natal in order to adequately test intervention effectiveness, an option selected by Shereshefsky and Yarrow (1974) and Parr (unpublished manuscript).

Among these studies, sample sizes have ranged from 24 women (Meeker, unpublished manuscript) to 106 couples (Parr, unpublished manuscript). However, information regarding statistical power (Weiner, 1971) was reported in one study only (Brugha et al [unpublished manuscript]) and there is, therefore, a risk of Type II errors among these studies (...serious problem of not finding a difference that is there" [Howell, 1987, p.194]).

The choice of a large sample size employed in the study by Reid et al (unpublished manuscript) (n=1010 women) is worth noting briefly. In a study investigating post-natal depression, where participants are not defined as "at risk" of morbidity, a large sample is essential in order to determine intervention efficacy. In a smaller sample, intervention effects could be confounded by the expected prevalence of morbidity (which, in the case of post-natal depression is approximately 10%-14% in the population [Campbell and Cohn, 1991]).

3. METHODOLOGY

There are two serious and inter-related methodological difficulties among the studies presented here. The first reflects the issue of measurement and the second reflects the definition/assessment of clinical disorder. A major difficulty surrounds the multiplicity of measures used across studies, another factor that clearly prohibits useful comparisons. Additionally, where measures are designed for specific studies without suitable psychometric development (Shereshefsky and Yarrow, 1974; Clulow, 1982; Cowan and Cowan, 1987; Parr, unpublished manuscript), the results are of negligible utility. In the Shereshefsky and Yarrow (1974) study, a further difficulty surrounds the reliability and validity of Projective Tests (Anastasi, 1988).

Clearly, as demonstrated in Chapter Two, the transition to parenthood is associated with the potential for individual psychological disequilibrium among new mother/fathers. It is essential, therefore, for researchers to identify appropriate diagnostic criteria (as in the studies by Elliott et al, 1988; Brugha et al, unpublished manuscript; Reid et al, unpublished manuscript) when employing either symptomatology or syndromes of disorder as outcome measures. Gordon and Gordon (1960), for example, simply relied on unstructured interviews by clinicians to identify emotional disequilibrium among their sample.

A related issue is the choice of appropriate standard measures used in the detection of symptomatology/syndromes. Several studies in the present review (Alexander, unpublished manuscript; Meeker, unpublished manuscript) have used the BDI (Beck et al, 1961). However, as noted in Chapter Two, the BDI has many items that would be expected to give elevated scores among women in the course of an uneventful transition to parenthood: fatigue, changes in body image, sleep disturbance, loss of libido. The study by Elliott et al (1988) and more recent studies by Brugha et al, unpublished manuscript and Reid et al, unpublished manuscript have employed the EPDS (Cox et al, 1987), which is currently recommended for use with this population (O'Hara and Zekoski, 1988). Similarly, although the Dyadic Adjustment Scale (DAS) (Spanier, 1976),

a self-report scale designed to measure the quality of relationships among married/co-habiting couples, has been identified as particularly useful in studies in the transition to parenthood (Belsky et al, 1985), the Scale has not been used in any of the studies reported here.

A final issue concerns the most appropriate and cost-effective context for the delivery of intervention. The majority of studies reviewed here have either been conducted outwith routine health services or, where they have been conducted within the auspices of, for example, the NHS, have been offered outwith existing ante-natal educational provision (Parentcraft Classes). There appears to be a clear mandate for research aimed at investigating the effects of psycho-social intervention in the transition to parenthood within the context of existing NHS provision. Encouraging though the results based on voluntary sector participation are (Parr, unpublished manuscript), the protocol described in this study (extensive meetings among small groups of parents with trained pairs of facilitators during both the pre-natal and post-natal period) would clearly exceed current financial resources in the NHS. In a representative Health Board area in Scotland (Ayrshire and Arran), where over three thousand births occur annually (Ayrshire and Arran Health Board, 1996), Parr's protocol would be unworkable. A question remains: is it possible to design an efficient and cost-effective NHS-based psycho-social intervention in the transition to parenthood?

4. IMPLICATIONS FOR FUTURE RESEARCH

In spite of serious shortcomings in conceptual formulation, research design, and research methodology among these studies, it is possible to identify trends in this literature which may suggest implications for future research design. These trends include:

a) The majority of studies reviewed in this paper indicated positive effects of intervention for either the individual (as identified in a reduction of the incidence of symptomatology, or syndromal incidence), or the parental dyad (as identified

across measures of interpersonal communication or broader concepts of relationship functioning.) This would appear to suggest that intervention is, at least, warranted.

b) There have been reports of experimental efficacy for interventions based on both educational models (e.g. Gordon and Gordon, 1960; Meeker, unpublished manuscript) and counselling models (e.g. Shereshefsky and Yarrow, 1974; Cowan and Cowan, 1987; Parr, unpublished manuscript). Given the wide variety of experimental protocols and measurement indices employed in these studies (and the range of methodological inadequacies observed across studies), it is impossible, at present, to suggest with certainty that either an educational model of intervention or a counselling model is superior. Further research within each model is required.

C) Although the treatment process has often been ill-defined in the studies reviewed here, two studies, one based on an educational model of intervention (Meeker, unpublished manuscript) and the other based on a counselling model (Shereshefsky and Yarrow, 1974), have explicitly identified "Anticipatory Guidance" (Brown, 1979) as an effective process model. Similarly, in the study by Gordon and Gordon (1960), the experimental intervention appears comparable to the "directed" Anticipatory Guidance model described by Meeker (unpublished manuscript).

d) When viewed collectively, studies by Elliott et al (1988), Brugha et al (unpublished manuscript) and Reid et al (unpublished manuscript) may indicate the importance of both pre-natal and post-natal intervention in the prevention of post-natal depression. However, the most appropriate timing for intervention in the promotion of broader individual/parental couple psychological well-being during the transition to parenthood is less clear. Intervention has been conducted in the pre-natal period only (Gordon and Gordon, 1960; Meeker. unpublished manuscript) and in both the pre-natal and post-natal periods (Shereshefsky and Yarrow, 1974; Cowan and Cowan, 1987; Parr, unpublished manuscript). Clearly, further research aimed at identifying an optimal intervention period is required.

e) Similarily, the length of intervention (number of sessions) has varied widely among studies, ranging from two sessions (Gordon and Gordon, 1960) to twenty-five sessions (Cowan and Cowan, 1987). Interventions based on educational models have generally been of shorter duration than studies based on counselling models. Again, further research aimed at identifying optimal intervention length is required.

f) Where "Mothers' Only Groups" were compared with "Couples' Groups" increased efficacy was demonstrated in "Couples' Groups" (Gordon and Gordon, 1960).

V. CONCLUSIONS

There are compelling reasons for developing programmes aimed at promoting adjustment in the psycho-social transition to parenthood. The importance of adequate parenting for the physical and mental development of children has been frequently noted (Gray et al, 1979; Murray, 1997). The potential for parental relationship disequilibrium following the birth of a child and the subsequent emotional cost of that disequilibrium for both individual parents and the family unit has also been fully considered (Belsky et al, 1983; Terry et al, 1991). The potential for individual psychopathology, in at least a minority of new parents, and the subsequent emotional distress to those individuals, families and the wider society is apparent (O'Hara and Zekoski, 1988; Ballard et al, 1994). While recognising the imperatives for action, it is essential to recognise the relative paucity of useful data in this area at the present time. The present research is flawed by conceptual, design and methodological difficulties. It appears that further research is required.

Future research must begin by clearly defining its conceptual model of promotion/prevention and its short and long-term objectives in relation to that model. From this basis, the research must then select the most useful context for programme implementation. Several considerations will effect this decision:

the availability of professional resources to implement suitable programs, the educational needs of these professionals to allow them to fulfil new roles, and availability of appropriate financial resources within increasingly cost-conscious public services. Following these considerations, there is a requirement for researchers to clearly define the process of intervention and to articulate that process through sound research design and methodology. It appears that the next requirement in the current research process is to consider these issues in the planning of a research protocol. This requirement will be explored in the next Chapter.

CHAPTER FOUR

ISSUES IN PLANNING INTERVENTION RESEARCH FOR THE TRANSITION TO PARENTHOOD

1. INTRODUCTION

Extensive literature reviews in the preceding Chapters have indicated that the transition to parenthood is associated with the potential for emotional disequilibrium in both individual parents and the parental relationship. This disequilibrium has been characterised in terms of significant individual symptomatology or syndromal caseness and/or as a significant decline in relationship quality/satisfaction during the post-natal period.

It has been suggested by researchers within both the sociological and psychological/psychiatric traditions that there are psycho-social determinants for individual/relationship disequilibrium during the transition to parenthood which include dysfunctional individual and cultural expectations of the parenthood experience. As has been noted earlier, it is, therefore, theoretically possible that the difficulties encountered by new parents during the transition to parenthood, especially the transition to first-time parenthood, could be modified by appropriate ante-natal intervention. However, as there are significant weaknesses in existing intervention research, further research appears warranted. This Chapter will attempt a synthesis of theory and action, and through that process, will reflect on a range of issues raised in planning intervention research for the transition to parenthood. These include issues in the formulation of an appropriate intervention, substantive issues in the field of mental health promotion/prevention, issues in providing an appropriate context for intervention with prospective parents, and a range of issues in research design and methodology.

II. FORMULATING PSYCHO-SOCIAL INTERVENTION FOR THE TRANSITION TO PARENTHOOD

In the transition to parenthood literature, parental relationship dissatisfaction has been principally examined as a function of role arrangements/role adjustments (Belsky, 1985; Belsky et al, 1986; Terry et al, 1991; Levy-Shiff, 1994), unrealistic cognitive expectations (Belsky, 1985; Ruble et al, 1988) and oppressive cultural expectations (Lee, 1997). In the medical model psychological/psychiatric literature, it has been suggested that the experience of post-natal depression is predicted by interpersonal psychological factors including, among others, parental relationship difficulties (Atkinson and Rickel, 1984; Whiffen, 1991/1992; Gotlib et al, 1991; Lovestone and Kumar, 1993). Both research traditions suggest that some modifiable cognitive and behavioural factors in the parental relationship determine adjustment during the transition to parenthood. Effective psycho-social intervention, therefore, must seek to assist new parents, as a social unit, in successful adaptation to the variety of new roles and tasks they will encounter in the transition to parenthood. It appears intuitively plausible that prospective parents who are psychologically prepared for the transition to parenthood, both through the acquisition of an appropriate knowledge base and skills repertoire, will experience fewer difficulties in adapting to role arrangements/role adjustments, in challenging dysfunctional cognitive expectations and in, at the very least, understanding the ubiquitous cultural expectations surrounding this life-transition.

As broadly conceived, new parents experience two types of adaptive strains during the post-natal period: a) strains associated with the physical demands (including sleep deprivation) of caring for an infant; b) strains associated with emotional demands in the changing parental relationship. It has been noted that the emotional distress associated with these strains is often unexpected by new parents (especially new mothers, who may experience significant

difficulties in adapting to the role-traditionalising effects of early parenting) and may negatively impact on individual and relationship well-being (Belsky, 1985; Ruble et al, 1988; Terry et al, 1991; Sanchez and Thomson, 1997). This would appear to suggest that, at the very least, the presentation of realistic, factual information regarding changing instrumental roles/tasks in early parenting and the differential effects of these changes on new mothers and fathers should be an essential component of an intervention programme.

Further, it appears that the presentation of factual information should extend beyond instrumental role/task issues to broader issues in psychological well-being. In addition to the range of psychological symptoms experienced by new parents during the post-natal period (including both anxious and depressive symptomatology) (O'Hara et al, 1991; Ballard et al, 1994), it may also be important to assist them in understanding that negative perceptions of their new roles/tasks are both predictable and acceptable and are not indicative of personal inadequacy. It appears essential that new parents should be offered an opportunity to understand, anticipate and, where possible, "normalise" common psychological responses to early parenting.

In addition to education for prospective parents on changing instrumental roles/tasks and common psychological responses to new parenting, research by Renick et al (1992), offers a further potential intervention component for consideration. In the "Prevention and Relationship Enhancement Programme" (PREP), a universal preventive intervention designed to prevent distress/divorce in married couples or couples planning marriage, couples were assisted in developing effective communication skills. As noted by Mrazek and Haggerty (1994), "...the central principle underlying the program is that constructive handling of disagreements can prevent later distress" (p. 277). The intervention has been successfully delivered through both didactic lecture and group discussion formats (Markman et al, 1993). PREP is a complete intervention "package" and, as such, may, in its entirety, be inappropriate in the context of preparation for parenthood. However, components of the

programme may be successfully adapted. Arguably, effective communication skills utilised by new parents during the post-natal period could either obviate or reduce significant relationship disharmony. These additive components, providing prospective parents with appropriate psycho-social education and attempting to assist them in enhancing communication skills, could, as noted by Brown (1979), "...act as a catalyst for the mobilisation of coping resources" (p. 2).

The provision of factual information (both instrumental/emotional and including communication skills), the anticipation of common psychological reactions and the mobilisation of coping resources are, arguably, essential components in psycho-social intervention in the transition to parenthood. As noted in Chapter Three, these components define the process model known as Anticipatory Guidance (Brown, 1979). Anticipatory Guidance has proved to be an effective model in two of the three transition to parenthood intervention programmes in which it has been utilised (Shereshefsky and Yarrow, 1974; Meeker, unpublished manuscript), and, further, has proven to be effective in other settings, including psychological preparation for surgery (Wallace, 1984; Wallace, 1986).

The comparative benefits of differing models of Anticipatory Guidance, including "Directed Anticipatory Guidance" (lecture formats) and "Non-Directed Anticipatory Guidance" (group discussion formats) are, as yet, unclear (Meeker, unpublished manuscript) and could usefully be compared within a research design. Further, although the role of bibliotherapy (provision of written information to accompany one-to-one therapy) has proven to be effective in a variety of educationally-based treatment contexts (Hawton et al, 1989; White, 1998), the effects of this approach in psycho-social preparation for first-time parenthood have not been empirically demonstrated. It is theoretically possible, on the basis of findings reported from studies utilizing lecture format interventions with samples of prospective parents (Gordon and Gordon,1960; Meeker, unpublished manuscript) and, for example, findings by White and

Keenan (1990) and White et al (1992) with clinical samples in which combined lecture and bibliotherapy formats have been succesfully employed in an educationally-based treatment model, that the most efficacious intervention approach would include elements of both Directed Anticipatory Guidance (lecture format) and bibliotherapy.

1. PROMOTING WELL-BEING/PREVENTING DISORDER DURING THE TRANSITION TO PARENTHOOD

It has been noted that, at the level of practice, "...interventions which prevent mental disorders also promote mental health and interventions that promote mental health also prevent mental disorders" (Health Education Authority, 1997, p.16). A transition to parenthood intervention focused on the parental relationship could seek either to prevent maladjustment, as defined in individual (symptomatology/syndromes) and relationship disequilibrium or to promote individual/relationship equilibrium/well-being. The choice of paradigm will be determined by the specific aims of intervention. It is important to clearly define the choice of paradigm as, at a conceptual level, that choice will guide research design and inform certain methodological decisions (e.g. choice of measures).

By definition, the promotion paradigm "...encompasses matters of individual as well as collective well-being and optimal states of wellness" (Mrazek and Haggerty, 1994, p.334). If the suggested aims for intervention focused on the parental relationship during the transition to parenthood are to provide factual information to prospective parents, to assist them in anticipating common psychological reactions and in mobilising appropriate cognitive and behavioural coping resources in order to maintain and encourage individual/relationship well-being, these aims appear most consistent with the promotion paradigm.

There is little reliable scientific evidence for the efficacy of mental health promotion initiatives across the range of mental health need (Mrazek and Haggerty, 1994; Tilford et al, 1997; Health Education Authority, 1997). A methodologically sound research intervention aiming to promote parental well-being during the transition to parenthood would, therefore, fulfil two substantive functions in the mental health promotion literature. First, it would compliment and significantly contribute to the existing knowledge base on interventions in this specific psycho-social transition, and, secondly, it would significantly contribute to the scientific credibility of the broader field.

III. ESTABLISHING AN APPROPRIATE CONTEXT FOR PSYCHO-SOCIAL INTERVENTION WITH PROSPECTIVE PARENTS

The success of a research intervention focused on the parental relationship during the transition to parenthood would depend on establishing appropriate access to the intervention by prospective parents. Ford (1994) has noted that the majority of pregnant women use the NHS during pregnancy and, further, that there is a significant level of resources invested in ante-natal care. At the present time in Great Britain, NHS-based ante-natal education is conducted through a range of health services: informally, on a one-to-one basis, through "shared care" arrangements between obstetrical units and GP Surgeries, and formally, through the provision of Parentcraft Classes and post-natal support groups (Department of Health, 1993).

Traditionally, Parentcraft Classes, generally offered during the third trimester of pregnancy, have focused on preparation for labour and delivery. Classes are sometimes offered to prospective mothers only, but, in many locations, "couples classes" are also available (Combes and Schonveld, 1992). Although there is available evidence indicating the effectiveness of Parentcraft Classes in promoting psychological well-being (as defined on measures of psychological morbidity [Hillier and Slade, 1989] and cognitive restructuring

[Maymon et al, 1992]), Combes and Schonveld (1992) revealed a number of dissatisfactions experienced by prospective parents attending NHS-based classes. Prospective parents noted that opportunities for discussion on life-style issues and emotional/social aspects of parenthood were often omitted. Further, there was a general perception that the educational quality of the classes was poor and that both women from ethnic minorities and men were often under-represented as participants at the classes. (Interestingly, Mackenzie [unpublished manuscript], reported that men participating in her qualitative study investigating the experience of fatherhood [n=19] felt patronised in their ante-natal classes.) As stated by Ford (1994), "...There are considerable inconsistencies in the variety of classes available, in the geographical coverage across districts and in the quality of what is offered..." (p.26). In spite of these difficulties, Parentcraft Classes appear to be the most extensively employed model of ante-natal education throughout Great Britain (Ford, 1994).

Elliott (1990a) stated that "...psychologists do little for antenatal education and therapy....Is this one area where we should find more time to give psychology away to other health professionals? " (p.245). Clearly, NHS-based Parentcraft Classes, at which both parents are encouraged to attend, would appear to be an ideal setting for intervention focused on the parental relationship. It is conceivable that the existing syllabus for Parentcraft Classes could be enlarged to incorporate experimental intervention through the addition of extra classes. The introduction and development of an appropriate research proposal would depend on close collaboration between a Clinical Psychologist, providing expertise on mental health during the transition to parenthood and research methods, and Community Midwives and Physiotherapists, often the traditional providers of ante-natal education. The important role played by Health Visitors in the psychological well-being of new families during the post-natal period would also have to be recognised in research planning (Holden, 1994).

In addition to potential benefits obtained from a research strategy which could lead to increased knowledge in parenthood preparation, these professional collaborations could, potentially, lead to improved ante-natal educational services for prospective parents, could reduce the current level of dissatisfaction with ante-natal education experienced by parents and could encourage opportunities for Clinical Psychologists (who are a scarce resource in the current NHS) to share professional skills with other health professionals. Further, by positioning research intervention within an existing service, financial resources required for research could be reduced, any competition between research intervention and existing Parentcraft Classes for participants could be avoided and, in the event that the experimental intervention proves effective, transfer of research findings to mainline service delivery could be easily accomplished.

IV. RESEARCH DESIGN AND METHODOLOGY

1. DESIGN

There are several important design considerations in transition to parenthood intervention research. These include: selection of an appropriate control group, selection of an appropriate placebo intervention, participant inclusion/exclusion criteria, duration of intervention, duration of follow-up, and potential sample bias. Each of these design considerations will be discussed. The purpose of this discussion is to provide a rationale for a research protocol.

i) Selection of a Control Group

Both the use of a control group and the randomised assignment of participants to that group are essential elements in the development of methodologically sound transition to parenthood intervention research (Duncan and Markman,

1988). Random assignment of participants to a control group guards against one source of threat to internal validity as it "...provides a defence against the possibility that any change in a dependent variable is caused not by the independent variable but by differences in the characteristics of the...groups" (Robson, 1993, p.87). Participants in the control group must be drawn from the same population as participants in the intervention group and would, in the context of the present research protocol, be required to attend the same set of Parentcraft Classes as participants in the intervention group(s). Of course, it must be recognised that participants in control groups can, potentially, be influenced by pre-test evaluation (Cowan and Cowan, 1987).

However, there is an ethical consideration involved in the use of a control group with prospective parents. With this population, psychological preparation for the event of childbirth (an event which will occur for every participating couple) can take place at one time-point only. (Obviously, psychological preparation for childbirth cannot occur post-natally.) The use of a control group ensures that a potentially helpful intervention is intentionally withheld from a proportion of the research sample. For that reason, it seems essential to estimate an appropriate sample size as soon as is possible in the research process (Weiner, 1971).

ii) Selection of Placebo Intervention

A related issue concerns the use of a placebo group. If experimental intervention involves the allocation of additional time from a researcher for those in the experimental group, this differential access to professional resources could threaten the internal validity of the study (Cook and Campbell, 1979). A placebo group could be employed to reduce this threat by ensuring that participants in this group receive an equal amount of time with the researcher (when compared to participants in the experimental groups) while receiving theoretically "inert" intervention. This would permit a comparison

among groups (control/experimental/placebo) with a suitable "time control". The importance of placebo groups in transition to parenthood intervention has been identified by Duncan and Markman (1988).

iii) Inclusion/Exclusion Criteria

There appear to be several important considerations in the selection of participant inclusion/exclusion criteria for transition to parenthood intervention research. First, the majority of studies exploring the transition to parenthood have employed first-time parents anticipating the birth of singletons (as opposed to multiple births). As noted by Belsky et al (1983), in an investigation of the transition to parenthood among primiparous and multiparous couples, overall quality of marital relationships was lower for couples with more than one child (as compared to primiparous couples). Further, primiparous couples regarded their relationships as more romantic (emphasising infatuation and sexuality), less partnership-based (emphasising instrumental efficiency) and they engaged in more joint leisure activities and marital interaction (Belsky et al, 1983). These findings would appear to suggest that primiparous and multiparous couples constitute significantly different populations of prospective parents. A similar observation can be made regarding parents anticipating the birth of singletons and those anticipating multiple births.

Research on both the transition to parenthood and postpartum depression has been largely based on findings among married participants. However, with changing social mores, increasing number of couples are having children while cohabiting. While it is arguable that these couples differ from couples who chose to marry and parent, there does not appear to be evidence demonstrating consistent differences among these populations. Conceivably, then, both married and cohabiting parents could be included in the same sample in an intervention study.

Studies by Lovestone and Kumar (1993) and Marks and Lovestone (1995) have indicated that parents with histories of severe psychological/psychiatric disorder are at significant risk of relapse during the transition to parenthood. This would appear to suggest that these prospective parents constitute a significantly different population when compared with prospective parents without histories of severe mental ill-health. Similarly, there is evidence to suggest that parents of babies requiring specialised neonatal care, especially where the babies have been very premature, may experience long term adverse effects on individual psychological/relationship well-being (Sternquist, 1996; Redshaw, 1997).

iv) Duration of Intervention

As noted in Chapter Three, both the length of interventions and the duration of post-intervention follow-up have varied considerably among transition to parenthood intervention programmes. Hosman (1994), in considering the broad field of mental health promotion, has noted that there is little reliable evidence on which to base a decision regarding optimal intervention length. Arguably, if experimental intervention is to be incorporated into existing Parentcraft Classes, a pragmatic decision must be made based on an estimate of the amount of time required to fulfil research aims and likely participant acquiescence to an elongated syllabus. Prospective parents, faced with a number of competing demands necessitated by preparation for impending births, may be unwilling to commit to lengthy experimental intervention, regardless of potential personal/relationship benefits. With reference to post-intervention follow-up, it was noted in Chapter Three that a minimum follow-up period of six months post-natal would be required to demonstrate intervention effectiveness.

v) Sample Bias

Combes and Schonveld (1992) have commented that "...Attendance at antenatal classes and postnatal groups is largely by white, middle-class educated women. Less than half of all pregnant women attend any classes, and even fewer attend most or all sessions. Certain groups of parents are missing out on parent education in groups - particularly those who are young, single, working-class or from an ethnic minority group" (p. xii). This narrow cultural and socio-economic representation at Parentcraft Classes could negatively affect the generalisability of findings generated by research based within this context. However, if one of the purposes of the research is to embed a mental health promotion intervention for prospective parents within existing Parentcraft Classes, this narrow cultural and socio-economic population constitutes the target population: they are the population most likely to attend classes. Clearly, the needs of non-attending parents, especially single parents, would require a different research protocol and intervention context.

2. METHODOLOGY

In addition to important design considerations in transition to parenthood intervention research, there are specific issues in methodology which should be addressed. These include: selection of appropriate measures, timing of measurement and potential researcher bias in intervention. Additionally, consideration should be given to the continued involvement of new parents in research during the post-natal period in the event of either obstetrical complications and/or neonatal ill-health.

i) Selection of Measures

In Chapter One, it was noted that the transition to parenthood is associated with psychological, sociological and biological factors operating inter-actively and, further, that it occupies a pivotal position between individual psychological development and systems (marital dyad/family development) models of behaviour (Goldberg, 1988). This multi-factorial complexity suggests that even where intervention is specifically focused on one aspect (parental relationship) of the transition to parenthood, the inter-active effects among other factors in the wider bio-psycho-social context must be acknowledged (Belsky, 1981; Wolfson et al, 1985). This imperative has implications for the selection of intervention measures: in addition to selecting instruments suitable for the measurement of the independent variables (e.g. parental communication), other instruments must be selected in order to control for important inter-active effects (e.g. infant temperament). It may be useful, therefore, to consider the transition to parenthood as comprised of several inter-related domains, including psychological well-being, relationship well-being, pregnancy well-being, social support (as defined by support available to new parents by family, friends, etc.) and coping (as defined by perceptions of coping/coping styles), when selecting appropriate measurement instruments.

If Anticipatory Guidance (Brown, 1979) is accepted as a process model for a relationship-based intervention in the transition to parenthood, and if the broad aim of intervention is to promote individual/relationship psychological well-being during this life-event, several research objectives are suggested, on the basis of the available literature. These include: maintenance/improvement of parental communication during the transition to parenthood; maintenance/ improvement of an equitable distribution of marital roles; and enhancement of relationship adjustment. These objectives, in turn, offer indications for the appropriate selection of measurement instruments across the domains suggested above.

There are a variety of self-report measurement instruments available to researchers, including standard self-completed questionaires, self-completed questionnaires devised for specific studies, interview rating scales, etc. In the curent research context, standard self-completed questionnaires would constitute the most useful form of measurement. In an intervention study, such as is proposed here, measurement of the dependent variables would, at a minimum, be required pre/post intervention and, in fact, would likely be repeated at intervals in the post-natal period. Standard self-completed questionnaires with known psychometric properties would ensure the accurate detection of change in dependent variables across measurement points. Further, questionaires could be easily distributed to participating couples and would require a minimum of time for completion (which might, as opposed to the use of more labour intensive/time intensive measurement methods, assist partipant compliance in the follow-up period). It must, however, be recognised that self-completed questionnaires are vulnerable to either "faking good" (attempting to create a favourable response) or "faking bad" (attempting to demonstrate greater psychological disturbance than actually exists) (Anastasi, 1988).

Questionnaires must be both reliable ("...test reliability indicates the extent to which individual differences in test scores are attributable to 'true' differences in the characteristic under consideration and the extent to which they are attributable to chance errors" [Anastasi, 1988, p. 109]) and valid ("...validity of a test concerns what the test measures and how well it does so" [Anastasi, 1988, p.139]). In order to establish methodologically sound research, the selected questionnaires must fulfil these criteria.

The measurement of psychological well-being during the transition to parenthood has been explored, in some detail, in Chapter Two. In the context of a mental health promotion intervention focused on the parental relationship, the prevention of psychological/psychiatric morbidity would not be a specific research aim. As indicated in the studies by Elliott et al (1988), Brugha et al

(unpublished manuscript) and Reid et al (unpublished manuscript), the prevention of post-natal depression raises differing research design/protocol issues to those considered here. However, as the transition to parenthood is potentially associated with psychological/psychiatric morbidity, for at least a minority of new parents, the accurate detection of depressive symptomatolgy would appear important. It has been suggested that the Edinburgh Post-Natal Depression Scale (Cox et al, 1987) is the instrument of choice for the assessment of depressive symptomatology among new mothers during the post-natal period. It must, of course, be clearly understood that the EPDS is not a diagnostic instrument.

In a validation study, conducted with women (n=84) during the early post-natal period (beginning in the first two post-natal months), Cox et al (1987) employed the Standardised Psychiatric Interview (Goldberg et al, 1970) and the Research Diagnostic Criteria (Spitzer et al, 1978) to examine the prevalence of depressive symptomatology in their sample (n=84 women). The sensitivity of the EPDS (proportion of participants who were "true positives") was 86%; specificity (proportion of non-depressed women who were "true negatives") was 78%. Split-half reliability (which provides a measures of consistency with regard to content sampling) was 0.88.

Interestingly, Ballard et al (1994), Deater-Deckard (1998) and Mackenzie (unpublished manuscript) also employed modified versions of the EPDS with new fathers. More commonly, studies investigating depressive symptomatology among new fathers have employed the Beck Depression Inventory (Beck et al, 1961) (Rees and Lutkin, 1971). However, it does appear that the Hospital Anxiety and Depression Scale (Zigmond and Snaith, 1983), a scale designed for the detection of depression/anxiety in medical outpatient clinics, might be of value with new fathers in this context. In their validation study, Zigmond and Snaith (1983) described the HAD Scale as "...a reliable instrument for screening clinically significant anxiety and depression" (p.364). In this study, reliability data indicated that, for the depression sub-scale, there were 1%

false negatives and 1% false positives, while on the anxiety sub-scale, there were 5% false positives and 1% false negatives (Zigmond and Snaith, 1983). Further, in a correlation study conducted with sub-scale scores obtained from a patient sample and psychiatric ratings obtained with the same sample, results confirmed the utility of the scale as a measure of severity for depression (r=0.7) and anxiety (r=0.74) (Zigmond and Snaith, 1983). It must be noted, however, that the HAD Scale has not been specifically validated for a population of prospective parents in either the ante-natal or post-natal period.

A self-report questionnaire designed to provide psychiatric diagnostic information would appear to be important in research where exclusion criteria include the presence/history of significant psychiatric ill-disorder. The Crown-Crisp Experiential Index (Crown and Crisp, 1979) fulfils this requirement and has been used in previous research in this area (Watson et al, 1984). The CCEI has been designed to "...obtain in five or ten minutes an approximation of the diagnostic information that would be gained from a formal psychiatric evaluation" (Crown and Crisp, 1979, p.3). Reliability and validity for the CCEI have been demonstrated in studies by Crown et al (1970) and Crisp and Priest (1971). Crown et al (1970) administered the present form of the CCEI to a sample composed of consecutive out-patients (n=62) and non-patients (n=109). The authors noted that "...all the sub-scales discriminated between the patients and the normal group at a statistically significant level" (Crown and Crisp, 1979, p.7). Subsequent reliability was established with a sample of men (n=129) in a test/re-test design. Reliability co-efficients (product-moment correlation) ranged from r=0.68 to r=0.77 (Crisp and Priest, 1971).

The detection of "caseness" (a level of symptomatology thought to warrant psychological intervention) on scales of psychological well-being raises an ethical issue for research in the transition to parenthood. In the event that participants demonstrate caseness scores, what course of action should be taken? Should these participants be offered further clinical assessment/treatment? First, as noted earlier, self-report questionnaires are

vulnerable to either "faking good" or "faking bad" (Anastasi, 1988). It is conceivable that caseness scores occurring at a single measurement point simply indicate transient disturbance (Elliott, 1994) and it must be remembered that psychological well-being measures are not, in any case, diagnostic instruments. Therefore, it would appear that only those participants demonstrating consistent caseness scores (at, for example, two or more consecutive measurement points) should be considered "at risk" for significant disturbance. As couples in the Ayrshire and Arran Health Board area are provided with routine support from a Health Visitor during the post-natal period, the most useful approach available would be to ensure that participants recruited to the research intervention and members of the Primary Care Team (Community Midwives/Health Visitors/GP's) responsible for their care are clearly informed that participants are eligible to seek psychological assistance (assessment/treatment/onward referral) from the Clinical Psychologist conducting the study, if necessary, at any time during the research period.

In terms of parental relationship well-being, there are various well validated and reliable communication scales and role inventory scales available (Fournier et al, 1983; Noller and Callan, 1988). In measuring parental relationship adjustment during the transition to parenthood, one of the most widely used scales is the Dyadic Adjustment Scale (DAS) (Spanier, 1976). The DAS has been designed to "...meet the need for relevant, valid and reliable measures which can be used in ...research on marital and non-marital dyadic relationships" (Spanier, 1976, p. 25). Belsky et al (1985a) have noted that the DAS is particularly useful in investigating relationship stability and change over time. A correlation of r= 0.86 has been observed between the DAS and the Locke-Wallace Marital Adjustment Scale (Locke and Wallace, 1959), a frequently used measure of marital adjustment. Further, total scale reliability has been reported as r= 0.96 (Spanier, 1976). As noted by Spanier (1976), "...The data indicate that the total scale and its component parts have sufficiently high reliabillity to justify their use" (p.24).

There are few instruments specifically designed to measure well-being during pregnancy. However, the Maternal Adjustment and Maternal Attitudes Questionnaire (Kumar et al, 1984), which has been designed to measure maternal perceptions and attitudes during pregnancy, and the Support in Pregnancy Questionnaire (McWilliams, 1993), which seeks to assess sources of perceived support available to pregnant women, are potentially useful measures in this context. Kumar et al (1984) stated, on the basis of a reliability study including women in late pregnancy (n=99) and first-time mothers (n=110), that the MAMA "...was reliable (test-retest and split-half) and that comparisons with independently gathered interview data showed that it has criterion related validity" (p.43). Similar information regarding the SPQ has been provided by McWilliams (1993). Predictive validity for the SPQ was obtained in a study with women in their second to third trimester of pregnancy (n=41) in which data obtained on the SPQ was significantly related to birthweight and obstetric complication rates (McWilliams, 1993).

The Family Support Scale (Dunst et al, 1984), designed to assess overall helpfulness of support available to new parents, would be useful in augmenting understanding of the effects of social support for this population. Reliability (internal consistency, split-half and short/long-term test and re-test) and validity (criterion validity) for this measure have been demonstrated in a study by Dunst et al (1984). As noted by Dunst et al (1984), "...The principal utility of the scale rests on its ability to discriminate between persons differing in their social support" (p.49). In the reliability and validity study with parents of pre-school children (n=139), Dunst (1984) reported a coefficient alpha among scale items of r=0.77 and test-retest reliability was reported as r=0.75.

There are a variety of robust coping effectiveness/coping strategy scales available (Terry, 1991; Terry et al 1991) and in this research context, parental perceptions of infant temperament and self-reported coping in the parental role would be of particular interest. The Parenting Stress Index (Abidin, 1990), specifically designed to measure stress in the parent/child system would,

therefore, appear useful. Information regarding both the validity (determined through a series of replicated factor analyses) and reliability (test-re-test) of this measure has been provided by Abidin (1990). The PSI is composed of four sub-scales (Parental Distress, Parent-Child Interaction, Difficult Child and Total) and alpha reliability coefficients in test-retest analyses have ranged from r=0.78 (Difficult Child) to r=0.84 (Total) (Abidin, 1990).

ii) Timing of Assessments

Having selected appropriate measurement instruments, it would be essential to consider the timing of measurements during the transition to parenthood. Clearly, the first requirement would be to obtain base-line measures and these would have to be taken prior to experimental intervention. It has been noted that follow-up should last approximately six months into the post-natal period, and it seems reasonable to attempt to measure relationship change/stability at intervals during that period. It is conceivable that monthly measurements between months one-four post-natally would be suitable in that they would provide information on individual/relationship functioning during and after the "baby honeymoon" (Belsky et al, 1983). Further, monthly assessments in the first four post-natal months would prevent excessive "questionnaire fatigue" among participants. Final follow-up could, then, be conducted at six months post-natally. This time-frame would allow a sufficient test of intervention efficacy without seriously jeopardising long-term participant compliance, a problem likely to occur with a longer research protocol.

iii) Researcher Bias

If experimental intervention sought to compare models of Anticipatory Guidance (Directed/Non-Directed/bibliotherapy), there would, obviously, be at least three experimental conditions, in addition to a control condition, employed in the research protocol. As the protocol would likely involve the same

researcher in the delivery of both "trainer-led" conditions (Directed/Non-Directed Anticipatory Guidance), it would be essential to ensure that these experimental conditions sufficiently differed in delivery and, further, that researcher bias in presentation of these conditions to participants did not affect the outcome of the experimental conditions. To ensure these imperatives, external validation by professional peers, possibly conducted through video-taped recordings, would be required.

iv) Obstetrical/Neonatal Complications

In the event of either obstetrical complications and/or neonatal ill-health, new parents may not wish to continue their participation in a research intervention. To avoid any insensitivity to parents in these situations, it would be essential to build a safeguard into the research protocol to ensure that unwanted intrusion during the post-natal period was avoided. Possibly the simplest method would be to establish a communication system with Community Midwives which would allow them to request that parents be withdrawn from the study if deemed necessary for any reason.

V. CONCLUSION

In planning methodologically sound transition to parenthood intervention, there are a range of important decisions to be made with regard to research formulation, the conceptual basis of intervention within the broader field of mental health promotion, the appropriate context for intervention delivery and research design. This Chapter has examined these issues in an attempt to develop a theoretical and practical basis for a research protocol. It would appear that a Pilot Study, incorporating the reflections in this Chapter, would be the next logical step in the research process.

CHAPTER FIVE

THE PROMOTING PARENTHOOD PROJECT: PILOT STUDY

I. INTRODUCTION

In an attempt to promote the mental health of first-time parents during the transition to parenthood, a research study, "The Promoting Parenthood Project", was designed. As will be seen, the design of the study was determined by the issues raised in the preceeding Chapters. Developed within the context of existing NHS Parentcraft Classes and in association with Community Midwives/Physiotherapists and Health Visitors, the study was approved by the Department of Obstetrics and Gynaecology (North Trust/Ayrshire and Arran Health Board). Ethical approval was granted by the Research Ethics Committee, Ayrshire and Arran Health Board and the Ethics Committee, Community Health Care (NHS) Trust (AAHB).

i) Aims and Objectives

The purpose of the study was to investigate the efficacy of Anticipatory Guidance in the promotion of mental health among first-time prospective parents. The specific objectives for experimental intervention were: a) to promote effective parental communication during the early post-natal period (first six months), b) to promote an equitable distribution of instrumental roles between parents during the early post-natal period, and, c) to promote parental relationship adjustment during the early post-natal period. The dependent variable was individual/couple psychological adjustment in the first six post-natal months following the birth of a first baby as measured by selected standard questionnaires.

II. The Pilot Study

As a preliminary step in the research process, a Pilot Study was conducted. The purposes of the Pilot Study were: a) to estimate participant volunteer rate; b) to assess the acceptability of experimental procedures and measures to participants; c) to assess whether principle measures (those measures of primary interest in the research study) would show responses consistent with previous studies; d) to assess whether measures of psychological well-being would demonstrate "caseness" (where applicable) in a proportion of the sample; and, e) to assess whether the principle measures would show variation over time. Further, it was anticipated that the results obtained on the principle measures in the Pilot Study could be employed in modelling statistical analysis for a large-scale study (in the event that the Pilot Study indicated that further research was warranted).

III. METHODS

1. DESIGN

The design model selected for the "Promoting Parenthood Project" was a comparative outcome between-subjects design, in which the independent variable was Anticipatory Guidance. For the Pilot Study, each of the Treatment Conditions were recruited to and conducted in full. The four Treatment Conditions were: a) Directed Anticipatory Guidance (Lecture Condition) (ante-natal classes employing a lecture format and accompanying Workbook), b) Non-Directed Anticipatory Guidance (Discussion Condition) (ante-natal classes employing a group discussion format), c) Workbook Only Condition (provision of written information only), and, d) Control Condition. As in the case of all pilot studies, the main purpose of the present investigation was to validate methodology and not to test a central hypothesis.

2. PARTICIPANTS

i) Inclusion/Exclusion Criteria

Cohabiting and married couples anticipating the birth of a first baby (singleton) and attending couples "Parentcraft Classes" at either Heathfield Clinic (Ayr) or Boyd Street Clinic (Prestwick) were eligible for the Pilot Study. Individuals with psychiatric histories (defined by the presence of diagnosed psychotic illness), single parents, couples anticipating twins/triplets, etc., and couples anticipating second (or subsequent) babies were excluded from the Pilot Study.

ii) Recruitment

For each Condition, couples were recruited at the first class in the sets of couples Parentcraft Classes held between November, 1994 and March, 1995. Each Treatment Condition was offered at each base. Although couples were recruited at two bases, these bases were, in fact, in the same urban centre in South Ayrshire: Ayr and Prestwick constitute one area for all local authority and Health Board purposes. On all indices of deprivation, this area of South Ayrshire is the least deprived (the most affluent) in the Ayrshire and Arran Health Board Area (Ayrshire and Arran Health Board, 1996). More recently, the Adult Health and Lifestyle Survey (Moore and Hatrick, 1999), commissioned by Ayrshire and Arran Health Board, has indicated that on all parameters of health considered in the survey (general health, physical health, mental health, sexual health and drug use) residents of this area of South Ayrshire achieved significantly higher ratings of positive health than residents of North and East Ayrshire. Further, in compiling the survey, residents of Ayr and Prestwick were considered as an homogenous sample. During the study period, couples were invited to attend Parentcraft Classes at either base and participants from both bases were, in keeping with usual local authority and Health Board practice,

considered as one homogenous sample for all descriptive and statistical purposes. The recent survey provides good empirical evidence to suggest that the sample are homogenous and analysis of differential effects by base would be redundant.

In the Ayrshire and Arran Health Board area, couples who indicate an interest in attending Parentcraft Classes (during early routine ante-natal visits) are invited to attend classes at 24 weeks gestation. During the Pilot Study period, a total of 152 couples were invited to attend the classes; of this number, 80 couples attended (52.6%) and 40 couples were recruited into the Pilot Study (50% of couples attending the classes). Table 5.1 presents data on the number of invitations, number of couples attending and number of couples recruited to the Pilot Study per base.

Couples attending Parentcraft Classes were invited to enter the Pilot Study through a brief verbal presentation (approximately 10-15 minutes), provided at the beginning of the first class by the researcher (MKR). The aims of the Pilot Study and procedures involved in the Pilot Study were fully explained.

Table 5.1

Number of couples who were invited to Parentcraft Classes, who then attended and were subsequently recruited into the Pilot Study by Base

	Heathfield			P/wick		
Cond.	Invited	Attend	Recruit	Invited	Attend	Recruit
Control	16	10	6	20	9	5
Discuss	20	9	3	20	12	4
Lecture	25	14	5	20	12	7
W/Book	12	6	5	19	8	5
Total	73	39	19	79	41	21
		53.4%	48.7%		51.8%	51.2%

iii) Participant Demographics

Thirty one couples completed the Pilot Study, indicating an attrition rate of approximately 22.5% (of the total number of couples recruited into the Study [n=40]). Of the couples completing the Pilot Study, 15 had been recruited from Heathfield Clinic and 16 had been recruited from Boyd Street. In this sample, there were 9 couples in the Control Condition, 7 couples in the Workbook-Only Condition, 10 couples in the Lecture Condition and 5 couples in the Discussion Condition.

a) Age

The mean age for women in the sample was 27.7 yrs. (s.d.=5.6 yrs) and the mean age for men in the sample was 29.7 yrs. (s.d.=5.7 yrs.). Table 5.2 presents mean ages, standard deviations and median ages for men and women in each Condition. As noted in Table 5.2, male participants were older than female participants in each Condition (although the median age of both

men and women was identical in the Discussion Condition). The oldest participants (both male and female) were in the lecture Condition and the youngest participants (again, both male and female) were in the Discussion Condition.

Table 5.2

Mean Ages/Standard Deviations/Median Ages per Gender per Condition
(n=62 participants)

Condition	Males (ages in years)	Females (ages in years)
Control (n=9 couples)		
Mean	30.6	25
s.d.	3.1	4.9
median	31	26
Discussion (n=5 couples)		
Mean	25	23.8
s.d.	4.9	4.4
median	26	26
Lecture (n=10 couples)		
Mean	33.5	31.3
s.d.	5.8	5.8
median	33.5	31.5
W/Book (n=7 couples)		
Mean	26.6	24.8
s.d.	5.4	6.1
median	25	24
Total (n=31 couples)		
Mean	29.7	27.8
s.d.	5.7	5.7
median	29	27

b) Marital Status

Twenty-eight couples were married (90%) and 3 couples were cohabiting (10%). For the married couples, the mean number of years married was 4.8 yrs. (s.d.=4.6 yrs.), and for the cohabiting couples, the mean number of years of cohabitation was 2.6 yrs. (s.d.=1.6 yrs.). Table 5.3 presents marital status information (percent married or cohabiting; number of years married or cohabiting) per Condition.

Table 5.3

Marital Status Data (percent married/cohabiting; number of years married/cohabiting) per Condition
(n=31 couples)

Condition	No. & % Married	Years Married	No. & % Living Together	Years Co-habiting
Control (n=9 couples)	8 (88.9%)	Mean 4.6 s.d. 3.1 med 4.1	1 (11.1%)	2.25 years
Discussion (n=5 couples)	10 (100%)	Mean 2.4 s.d. 1.1 med 2.7	0	
Lecture (n=10 couples)	9 (90%)	Mean 7.0 s.d. 6.1 med 5.7	1 (10%)	4.5 years
W/Book (n=7 couples)	6 (85.7%)	Mean 3.8 s.d. 4.4 med 1.8	1 (14.3%)	1 year

As noted in Table 5.3, married couples in the Lecture Condition had been married for a longer period of time than couples in the other Conditions.

Interestingly, cohabiting couples in the Lecture Condition had also cohabited for a longer period that couples in the other Conditions.

c) Employment Status

Of the total sample, the largest proportion (54 individuals/87%) were employed. Of the women, 80.6% (n=25) were employed, as were 93.5% (n=29) of the men. In every couple, at least one partner was employed. Table 5.4 presents data on employment status per participant per Condition. As noted in Table 5.4, there were more unemployed participants in the Discussion Condition than in the other Conditions.

Table 5.4

Employment Status per Participant per Condition
(n=62 participants)

Employed	Control	Discussion	Lecture	W/Book
Yes	9	9	17	19
No	1	5	1	1

d) Educational Status

All participants in the Pilot Study had achieved at least O Grade or GCSE educational qualifications. Table 5.5 presents data on educational status (highest level of education per participant) by Condition. As noted in Table 5.5, there were fewer participants in the Discussion Condition with degree qualifications than in the other Conditions.

Table 5.5

Educational Status per Condition: Highest Level of Education per Participant (n = 62 participants)

Education	Control (n=18)	Discussion (n=10)	Lecture (n=20)	W/Book (n=14)
Higher/ A Level	3	1	2	2
Prof. Qual.	3	2	4	2
HNC	4	3	4	2
HND	3	1	4	1
Degree	3	1	4	3
Other	2	2	2	3

e) Obstetrical Data

For 22 couples (71%), the expected baby was "planned". Among the entire sample, two women (6.7%) had experienced previous abortions and one woman had experienced a previous miscarriage. (None of these women had experienced both an abortion and a miscarriage.) The average length of gestation at birth was 40 weeks, with a range of 37-42 weeks gestation. The average duration of labour was 10.5 hours, with a range of 3-21 hours. Where information on the type of delivery was available (29 deliveries/93.5%), 15 deliveries were Spontaneous Vertex Deliveries (SVD) (51.7%), 6 deliveries were Caesarean Sections (20.6%), and 8 deliveries were Forceps Deliveries (27.7%). Among these deliveries 14 girls (48.3%) and 15 boys (51.7%) were delivered. There was no evidence to suggest that any of the babies or mothers required extensive specialist nursing or medical care.

f) "Drop-Out" Participants

Among the 9 couples who left the Pilot Study, the number of couples who left each Treatment condition was as follows: 3 couples left the Workbook-Only Condition, and 2 couples left each of the remaining Conditions. Eight of the nine couples who left the Pilot Study did so before returning questionnaire data at Month One post-partum; the ninth couple left the Study at Month Two post-partum.

Table 5.6 compares the "drop-out" sample with those couples who completed the Pilot Study on selected demographic variables. As noted in Table 5.6, both men and women in the "drop-out" sample were slightly older than men and women in the "completed" sample. Further, a slightly higher proportion of couples in the "drop-out" sample were cohabiting and a higher proportion of women in that sample had experienced previous miscarriages/abortions.

Table 5.6

Comparison of Completed Participants (n = 31 couples) with "Drop-Out" Participants (n=9 couples) on Selected Demographic Variables

Variable	Completed	Drop-out
Age (in years)		
Women	27.7 (s.d.=5.6)	28.4 (s.d.=4.3)
Men	29.7 (s.d.=5.7)	31.4 (s.d.=6.0)
Married	28 couples (90%)	7 couples (78%)
Cohabiting	3 couples (10%)	2 couples (22%)
Employed		
Women	25 individuals (80.6%)	8 individuals (89%)
Men	29 individuals (93.5%)	8 individuals (89%)
Unemployed		
Women	6 individuals (19.4%)	1 individual (11%)
Men	2 individuals (6.5%)	1 individual (11%)
Baby "Planned"	22 couples (71%)	7 couples (78%)
Miscarriages	2 women (6.7%)	2 women (22%)
Abortions	2 women (6.7%)	2 women (22%)

iv) Materials

a) Workbook

A workbook, entitled "Preparing for Parenthood" was written for the Pilot Study. The workbook, approximately 7,000 words in length, was divided into three main sections: "Exploring Good communication", which considered the importance of effective communication in relationships, self-assessment of communication styles and a brief review of the skills involved in effective communication; "Roles and Tasks during the Transition to Parenthood", which considered predictable changes in self-perception and perceptions of others during the transition to parenthood, the changing division of labour between partners and the importance of individual/couple leisure pursuits; and, "Feeling Like a Parent: Good/Bad/Indifferent", which considered common psychological and emotional responses to the transition to parenthood, including post-natal depression. The workbook provided both didactic information and self-assessment tools aimed at assisting first-time parents in recognising common psychological responses to the transition to parenthood and mobilising appropriate coping resources.

The workbook was assessed for readability using the Flesch Formula reading scores (Flesch, 1948). This formula calculates the average number of syllables in a word and the average number of words in a sentence and indicates a "reading ease" score on a scale between 0 (practically unreadable) and 100 (easy for any literate person). The reading ease score enables an estimation of the population who would understand a given piece of material. Ley (1977) provides a "cautious" estimate of the IQ level required for understanding. The workbook achieved a reading ease score of 78.4, suggesting that approximately 80% of the population would be able to understand the text and that an IQ score of approximately 87 (low average ability) was required for comprehension.

b) Measures

A range of standard questionnaires assessing five domains of the transition to parenthood (psychological well-being, relationship well-being, pregnancy well-being, social support and coping) were employed in the Pilot Study. Additionally, a questionnaire was designed to elicit basic demographic information including marital, educational, employment status, obstetric history and psychiatric history. This questionnaire was designed in two versions (mothers and fathers).

The standard questionnaires (listed by domain) included:

Psychological Well-Being Measures

Crown-Crisp Experiential Index (CCEI) (Crown and Crisp, 1979), a self report questionnaire designed to provide psychiatric diagnostic information. The Index is composed of six sub-scales measuring Free-Floating Anxiety, Phobic Anxiety, Obsessionality, Somatic Concomitants of Anxiety, Depression and Hysterical Personality.

Edinburgh Post-Natal Depression Scale (EPDS) (Cox et al, 1987), a 10 item self-report questionnaire designed to assess depression among post-partum mothers. Each item is scored on a 4-point scale. In this study, a score of 12 or above was employed to indicate low mood or dysphoria at the time of completion (Cox and Holden, 1994).

Hospital Anxiety and Depression Scale (HAD) (Zigmond and Snaith, 1983), a 14-item self-assessment scale designed for the detection of depression and anxiety in hospital and medical outpatient clinics. Each item is scored on a 4-point scale. For both the depression and anxiety sub-scales, scores of 11 or more are considered "definite cases". The HAD Scale (Anxiety sub-scale) was

employed with both men and women; the Depression sub-scale was employed with men only.

Stait-Trait Anxiety Inventory (STAI) (Spielberger et al, 1970), a self-report scale designed to measure two distinct anxiety concepts (stait and trait anxiety) in non-psychiatrically disturbed adults. The STAI is composed of two separate self-report scales, consisting of 20 items each. Each item is scored on a 4-point scale.

Relationship Well-Being Measures

Communication Scale (COMM) (Fournier et al, 1983), a 10-item sub-scale of the marital inventory, ENRICH, designed to assess individual feelings and attitudes to communication between partners in relationships. Each item is scored on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree", with higher scores indicating more positive attitudes.

Dyadic Adjustment Scale (DAS) (Spanier, 1976), a 32 item self-report scale designed to measure the quality of relationships among married and cohabiting couples. The DAS is composed of four sub-scales: Dyadic Satisfaction, Dyadic Cohesion, Dyadic Consensus and Affectional Expression. Most items are scored on a 6-point Likert scale, ranging from "Always Agree" to "Always Disagree", with higher scores indicating higher perceptions of relationship functioning.

Marital Role Inventory (MRI) (Noller and Callan, 1988), a 21-item self-report inventory designed to assess the extent to which individuals believe their partner should increase efforts at household tasks. Items are scored on a 5-point Likert scale, ranging from "spouse should decrease effort a great deal" to "spouse should increase effort a great deal". Higher scores indicate greater dissatisfaction with spouse's current performance

Pregnancy Well-Being Measures

Support in Pregnancy Questionnaire (SIP) (McWilliams, 1993), a 26-item self-report questionnaire designed to assess the sources of perceived support available to pregnant women. The questionnaire is composed of four sub-scales: Partner Support, Maternal Attitude, Parental Support, Family and General Support. Items are scored on a 7-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree".

Maternal Adjustment and Maternal Attitudes Questionnaire (MAMA) (Kumar et al, 1984), a 60-item self-report measure designed to assess maternal perceptions and attitudes during pregnancy and the post-partum period. The measure is composed of five sub-scales: Body Image, Somatic symptoms, Marital Relationship, Attitudes to Sex, Attitudes to Pregnancy (used pre-natally) and Attitudes to Baby (used post-natally). Items are scored on a 4-point Likert scale, ranging from "Never" to "Very Often". Higher scores reflect lower levels of adjustment or more negative attitudes.

Social Support Measures

Family Support Scale (FSS) (Dunst et al, 1984), an 18-item self-report measure designed to assess an overall index of the degree of helpfulness of support available to new parents. Each item is rated on a 5-point Likert scale, ranging from "Not at all helpful" to "Extremely Helpful". Higher scores indicate greater perceived helpfulness of social support.

Coping Measures

Coping Effectiveness Scale (CES) (Terry, 1991), a 6-item self-report measure designed to obtain a subjective evaluation of self and partner coping effectiveness in the post-partum period. Each item is rated on a 5-point Likert scale. Higher scores indicate higher perceived coping effectiveness.

Parenting Stress Index/Short Form (PSI) (Abidin, 1990), a 36-item self-report measure designed to assess stress in the parent-child system. The Index is composed of three sub-scales: Parental Distress, Parent-Child Dysfunctional Interaction and Difficult Child. Items are scored on a 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree".

c) Timing of Measures

There were six measurement points in the Pilot Study: Baseline, Months 1-4 post-partum and follow-up measurement at six months post-partum. Following recruitment to the Pilot Study, and the return of Consent Forms (informed consent to take part in the Study), the attending health professionals associated with each couple and individual (GP, Health Visitor, Midwife) were made aware of the couple's decision to take part in the Pilot Study. At each measurement point, questionnaires were posted to mothers and fathers individually and were returned in postage-paid envelopes. Couples were asked to complete questionnaires individually and to refrain from comparing responses. Where necessary, "reminder" telephone calls were made to ensure the return of questionnaires.

For every couple in the Pilot Study, Midwives were asked to inform the researcher of the date of the baby's birth and to authorise further participation in the Pilot Study by the couples. (This safeguard was employed to ensure

that couples who experienced significant obstetrical or neo-natal complications would not be unduly distressed by continued involvement in the Pilot Study.)

Table 5.7 indicates the allocation of measure by measurement point by gender.

Table 5.7

Measure by Measurement Point by Gender

	Gender		Measurement Point		
Measure	M	F	Baseline	Month 1-4	Follow-Up
Self Data	*	*	*		
CCEI	*	*	*		
CES	*	*			*
COMM	*	*	*	*	*
EPDS		*		*	*
FSS	*	*			*
HAD (Anx.)	*	*	*	*	*
HAD (Dep.)	*		*	*	*
MAMA		*	*		*
MRI	*	*	*	*	*
PSI	*	*			*
SIP		*	*		
STAI/TRAI	*	*			
STAI/STAT	*	*	*	*	*

v) Procedures

At each base, the couples attending each course of Parentcraft Classes were randomly allocated, as a group, to one of the four Treatment Conditions at the time of recruitment. Random allocation per group was conducted on the basis of numbers (1 - 4 per Condition) drawn from a hat. Every couple participating

in the Pilot Study attended the course of Parentcraft Classes (one evening class weekly over a five-week period). Each full course of Parentcraft Classes was conducted by the same Community Midwife and Physiotherapist. Four Community Midwives (two per base) and two Physiotherapists (one per base) offered Parentcraft Classes during the Pilot Study period. At each base, Community Midwives were randomly assigned by "rota" to each course. Participating Community Midwives and Physiotherapists were "blind" to the Treatment Condition allocation of each course of Parentcraft Classes.

Parentcraft Classes, structured and presented according to a standard curriculum designed by Midwifery Services (Community Health Care [NHS] Trust) (AAHB), employed a lecture format, with question and answer periods. The structure and presentation of Parentcraft Classes remained constant throughout the Pilot Study period. Each Class was approximately two hours in length and the following topic areas were addressed in Classes One - Four: Early Labour and Admission to Hospital, Labour and Pain Relief, Care of Mother and Baby, and Feeding of the Infant. The final Class was a tour of the Labour Suite at Ayrshire Central Hospital (where all deliveries took place.)

Specific procedures for each Treatment Condition were as follows:

Lecture Condition

Couples in this Treatment Condition attended two one-hour lectures, in addition to the five Parentcraft Classes. The two additional classes were conducted at the same base in which Parentcraft Classes had been held, and were conducted on the same evening of the week, in the two consecutive weeks following the last Parentcraft Class. Every additional class was conducted by the researcher (MKR). The lectures covered three topic areas: "Improving Couple Communication", an overview of effective communication methods (adapted from the work by Renick et al, 1992); "Changing Tasks and Roles in

the Transition to Parenthood", an overview of predictable role and task adjustments during the transition to parenthood and problem solutions; and, "Feeling Like a Parent", an overview of common psychological reactions to the transition to parenthood, including post-natal depression, and, again, potential problem solutions. Although questions were encouraged, group discussion was discouraged. The Course Workbook was given to each couple to accompany the lectures.

Discussion Condition

Couples in this Treatment Condition attended two one-hour discussion classes, in addition to the five Parentcraft Classes. As in the previous Treatment Condition, the additional classes were conducted at the same base in which the Parentcraft Classes had been held and on the same evening of the week, in the two consecutive weeks following the last Parentcraft Class. Again, each additional class was conducted by MKR who, in this Treatment Condition, "facilitated" group discussion among the couples. Topics of discussion were selected by each group of couples in each class, and there was no attempt to enforce a standard agenda.

The development of a "placebo condition", in which the effects of time spent with participants by a researcher could be controlled for, appeared essential in this intevention context. The concept of a placebo condition is drawn from pharmacological research designs and is clearly problematic in social science research: it is, by definition, difficult to define an "inert substance" in the social sciences (White and Keenan, 1990). In the present research design, the Discussion Condition was selected as a "placebo-type" Condition. Through the use of this Condition, it was possible to provide a suitable control for time spent by the researcher with couples in the Lecture Condition. However, it must be noted that this Condition was also a potential form of intervention and was not, therefore, entirely "inert".

Workbook-Only Condition

Couples in this Treatment Condition attended the five Parentcraft Classes only and, in addition, received the Course Workbook. The Course Workbook was mailed to the couples after the completion and return of base-line data and prior to the births.

Control Condition

Couples in this Condition attended the Parentcraft Classes only and were not offered access to the Course Workbook.

a) Procedural Validation

Video recordings were taken at each class in the Lecture and Discussion Conditions by a Research Assistant. Two five-minute video recordings were taken in each Condition: one recording per Condition per base (total=4 recordings). The purpose of the recordings was to enable external procedural validation. Five Chartered Clinical Psychologists were asked to view the recordings, which were presented in random order. They were asked to identify, on a "Video Rating Scale" (devised for the study), the format of the class (Lecture/Discussion Condition), defined in writing on the Rating Scale and discussed by the researcher (MKR) prior to the viewings. The psychologists viewed the recordings as a group and were asked not to confer in reaching a rating decision. For each recording, there was 100% concordance among the psychologists on the format employed, with each recording correctly identified in each case.

b) Satisfaction Ratings

Couples in the Discussion Condition (n=5 couples) and Lecture Condition (n=10 couples) were asked to rate satisfaction with the classes, interest level of the presented or discussed material and their comprehension of the class material on five-point Likert scale devised for the study. The mean scores for women/men in each Condition for each rating are presented in Table 5.8. As noted in Table 5.8, mean rating scores were comparable across Conditions and genders, indicating roughly equivalent levels of satisfaction, interest and comprehension.

Table 5.8

Mean Satisfaction/Interest/Comprehension Rating Scores per Gender per Discussion Condition (n= 5 couples)/Lecture Condition (n= 10 couples)

Rating	Discussion		Lecture	
	Women	Men	Women	Men
Satisfaction				
Mean	4.6	4.6	4.6	4.6
s.d.	0.2	0.9	1.0	0.9
Interest				
Mean	4.7	4.6	4.8	4.7
s.d.	1.0	1.3	0.8	1.0
Comprehension				
Mean	4.7	4.7	4.7	4.7
s.d.	0.5	0.3	0.2	0.9

c) The Concept of "Baseline" in this Study

As noted in Chapter One, the transition to parenthood is defined as "...the fairly brief period from the beginning of pregnancy through the first months of having a child" (Goldberg, 1988, p.1). There are, of course, a range of psychological changes experienced by prospective parents from the moment a pregnancy is confirmed (Cowan and Cowan 1998) and continuing through the transition. As a result, the psychological "baseline" for new parents occurs prior to the confirmation of pregnancy, and, indeed, possibly prior to the time at which couples decide to plan a family.

In the context of this intervention study, "baseline" will be used to refer to the point in time prior to experimental intervention (which, in the design of this study, occurs late in the third trimester of pregnancy). While defining a pre-intervention psychological state for the sample in this study, it must be recognised that "baseline" in this context is imposed on a period of continuing psychological transition for the sample.

In an attempt to reduce inter-participant variation in this study on scores which will be measured over six intervals of time, "change scores" (derived, in this instance, by subtracting the raw score obtained per participant at each measurement point from the raw score obtained by that participant at Baseline) will be employed. This approach has been advocated by Hills and Armitage (1979) and Armitage and Hills (1982) and will be essential in this context where a psychological "process" unfolding over time is being measured.

IV. RESULTS

1. INTRODUCTION

a) Factors Determining Presentation of Data

All the measures described in the Methods Section were employed in the Pilot Study. However, the data presented in this Results Section are data obtained on the principle measures only. In planning the Study, five measures were considered principle measures, two measures drawn from among the Psychological Well-Being Measures (Hospital Anxiety and Depression Scale, Edinburgh Post-Natal Depression Scale), and the three Relationship Well-Being Measures (Communication Scale, Dyadic Adjustment Scale and the Marital Role Inventory). These measures were defined as "principle" measures on the basis of their relatively greater importance to the research hypothesis, well-established psychometric properties and their use in other similar studies.

The remaining measures (which may be considered subsidiary measures) were selected because they identified factors considered likely to affect findings observed among the principle measures in inter-group statistical comparisons (e.g. maternal stress during pregnancy, parental perceptions of baby behaviour, etc.). Given the small sample size in the Pilot Study and the consequent lack of statistical "power" (with the probability of incorrectly rejecting a null hypothesis), inter-group comparisons were not undertaken as part of this analysis. Data on the subsidiary measures, therefore, have not been included here.

2. PRESENTATION OF DATA

For each measure, data presentation begins with summary statistics (mean scores, standard deviations and median scores) in appropriate Tables

(Condition by gender). On the basis of previous studies, it was anticipated that differences in scores between genders would be observed for each measure, and, further, that a change (decrease or increase depending on measure) in scores over time (Baseline-Month Six) would also be observed. These differences (and observations on particular differences in scores among Conditions) will be noted in the brief discussion following the Tables.

Further, statistical associations among the three Relationship Well-Being Measures were considered. It was anticipated that there would be correlations among some of these measures, and the purpose of this analysis was to examine the degree of that correlation. For the two principle Psychological Well-Being Measures (Hospital Anxiety and Depression Scale, Edinburgh Post-Natal Depression Scale), "caseness" Tables are also presented. Finally, the variation in individual scores among Conditions/genders for two measures (Hospital Anxiety and Depression Scale [Anxiety sub-scale] and the Dyadic Adjustment Scale [Total sub-scale]) is considered in detail.

a) Psychological Well-Being Measures

i) Hospital Anxiety and Depression Scale (HAD): Anxiety sub-scale

Table 5.9 presents mean scores, standard deviations and median scores for the HAD Scale (Anxiety sub-scale) obtained by women and men in each Condition at each measurement point.

Inspection of the raw data indicated that mean and median scores obtained by women in each Condition at each measurement point were generally higher than those obtained by men. There were, however, some minor reversals of this effect observed across Conditions and measurement points.

Further, a general trend was observed where mean and median scores in each Condition decreased over time (Baseline-Month Six). There were obvious exceptions: in the Lecture and Discussion Conditions (women only), mean scores obtained at Baseline/Month Six were relatively unchanged (although some variability in mean scores was observed in the intervening measurement points) and similar effects were observed in the median scores among men in the Lecture Condition and women in the Discussion Condition.

TABLE 5.9

HAD Scale (Anxiety Sub-Scale): Mean Scores/Standard Deviations/Median Scores Per Condition Per Gender (Baseline-Month Six)
(n=31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control (n = 9 couples)							
Women	m =	8.2	8.2	7.3	7.0	6.6	3.7
	s.d. =	4.6	4.0	4.2	5.1	4.8	2.5
	med =	6.0	6.0	5.0	5.0	6.0	4.0
Men	m =	4.4	3.5	3.3	2.6	2.2	3.4
	s.d. =	1.4	1.9	1.9	2.6	1.9	3.0
	med =	5.0	4.0	4.0	2.0	2.0	3.0
Workbook (n = 7 couples)							
Women	m =	6.7	5.8	4.1	3.1	3.7	2.4
	s.d. =	5.0	2.9	3.5	3.9	3.4	2.6
	med =	7.0	5.0	4.0	1.0	2.0	2.0
Men	m =	3.1	3.7	1.7	1.2	1.2	.85
	s.d. =	1.5	2.0	1.6	.95	.75	1.2
	med =	3.0	3.7	1.0	2.0	1.0	1.0

TABLE 5.9 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	4.8	6.1	4.8	2.4	3.4	4.3
	s.d. =	3.0	1.9	1.7	2.6	2.2	3.8
	med =	5.0	6.0	4.0	1.5	3.0	3.5
Men	m =	4.4	4.6	4.1	3.0	2.9	4.10
	s.d. =	3.5	3.6	4.0	3.6	3.5	4.3
	med =	3.5	3.5	4.0	2.0	2.0	3.5
Discussion (n = 5 couples)							
Women	m =	6.4	7.8	6.6	4.8	6.8	6.2
	s.d. =	3.0	3.7	3.7	1.9	5.2	5.3
	med =	6.0	7.0	6.0	5.0	4.0	6.0
Men	m =	5.6	3.4	3.4	2.8	3.2	2.6
	s.d. =	3.0	1.1	3.2	2.3	3.4	1.8
	med =	5.0	3.0	3.0	2.8	2.0	3.0

HAD Scale (Anxiety sub-scale): Caseness

Women

Caseness was defined by a score of 11 and greater. Table 5.10 presents caseness incidence per female participant at each measurement point.

As noted in Table 5.10, there were 9 women in the sample (29.0%) demonstrating caseness at a minimum of one measurement point. Of these, two women (Case No.'s 15 and 18 [Control Condition]) demonstrated caseness at the majority of measurement points except at Month Six. Interestingly, at Baseline there were four women demonstrating caseness, while at Month Six there were only two women demonstrating caseness (neither of whom had demonstrated caseness at Baseline).

Men

There was only one man in the sample demonstrating caseness at any measurement point. He (Case No. 49 [Lecture Condition]) demonstrated caseness at five consecutive measurement points (Month One-Month Six), with raw scores ranging from 11 (Baseline) to 14 (Month Six).

ii) HAD Scale: (Depression sub-scale)

Table 5.11 presents mean scores, standard deviations and median scores for the HAD Scale (Depression sub-scale) obtained by men in each Condition at each measurement point. (The Depression sub-scale was employed with men only.)

TABLE 5.10

HAD Scale (Anxiety Sub-Scale): Caseness by Measurement Point (Women)
(Raw Scores)
(n=9 participants)

CASE NO	BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
10	12					
11				12	11	
15	17	15	16	17	15	
18		15	12	11	11	
28	13					
30	13					
46						14
60			13		15	14
62		13				

TABLE 5.11

HAD Scale (Depression Sub-Scale): Mean Scores/Standard Deviation/Median Scores
Per Condition (Baseline-Month Six)
(n= 31 couples)

Condition	B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control (n = 9 couples)						
m =	2.9	3.6	3.3	3.7	3.4	3.0
s.d. =	2.6	2.6	2.7	3.2	3.4	2.7
med =	2.0	3.5	3.0	2.5	2.0	2.5
Workbook (n = 7 couples)						
m =	2.5	2.4	1.5	1.9	2.0	1.7
s.d. =	3.2	1.8	1.5	2.8	2.3	1.9
med =	1.0	1.5	1.0	1.0	1.5	1.5
Lecture (n = 10 couples)						
m =	2.4	2.9	2.7	1.9	1.5	2.3
s.d. =	2.5	2.2	3.2	2.5	2.4	2.7
med =	2.0	3.0	2.0	1.0	1.0	2.0
Discussion (n = 5 couples)						
m =	3.0	5.8	4.8	3.2	4.2	3.4
s.d. =	3.1	4.8	4.3	2.6	5.1	3.9
med =	2.0	3.5	4.8	2.5	4.2	2.0

Inspection of the raw data indicated a decrease in mean scores over time (Baseline-Month Six) for the Workbook-Only Condition. In examining the median scores over time, there was a slight increase observed in the Control Condition and the Workbook-Only Condition, while scores in the Lecture/Discussion Conditions remained unchanged.

HAD Scale (Depression sub-scale): Caseness

As in the HAD Scale (Anxiety sub-scale), caseness for the Depression sub-scale was defined by scores of 11 and greater.

Again, there was only one man in the sample demonstrating caseness at any measurement point. He (Case No. 49), the same man who demonstrated caseness on the HAD Scale (Anxiety sub-scale), demonstrated caseness at Month Two only (with a raw score of 12).

iii) Edinburgh Post-Natal Depression Scale (EPDS)

Table 5.12 presents mean scores, standard deviations and median scores obtained by women in each Condition on the EPDS. (The EPDS was employed with women only.)

In inspecting the raw data, it was observed that the mean score obtained by women in the Discussion Condition at Month One was equal to caseness (although the median score was below caseness). Further, mean scores and median scores obtained by women in this Condition were higher than mean

TABLE 5.12

EPNDS: Mean Scores/Standard Deviations/Median Scores
Per Condition (Month One-Month Six)
(n= 31 women)

Condition	Month One	Month Two	Month Three	Month Four	Month Six
Control (n = 9 women)					
m =	10.2	8.3	6.6	7.0	4.3
s.d. =	6.0	6.3	5.9	7.4	3.2
med =	9.0	9.0	6.0	3.5	5.0
Workbook (n = 7 women)					
m =	6.4	4.14	4.14	3.5	3.7
s.d. =	3.7	3.8	4.3	3.9	5.2
med =	7.0	4.0	2.0	2.0	2.0
Lecture (n = 10 women)					
m =	7.4	4.4	3.4	2.5	6.4
s.d. =	4.4	3.0	3.2	2.2	8.1
med =	7.0	4.0	2.0	2.0	3.0
Discussion (n = 5 women)					
m =	12.0	7.0	9.0	8.0	8.0
s.d. =	5.3	5.6	4.5	9.13	6.8
med =	10.0	7.0	9.0	5.0	6.0

Scores and median scores obtained by women in the other Conditions at five of the six measurement points. (It must be remembered that the Discussion Condition was the smallest group in the Pilot Study [n=5 women].)

For each Condition, a decrease in mean and median scores was observed from Baseline to Month Six.

EPDS: Caseness

Caseness (defined as low mood/dysphoria) was indicated by scores of 12 or greater. Table 5.13 presents caseness incidence per participant at each measurement point.

There were ten women in the sample (33.3%) demonstrating caseness at a minimum of one measurement point. Three women (Case No's. 15 and 18 [Control Condition]; Case No. 60 [Discussion Condition]) demonstrated caseness at a majority of measurement points, with the remaining seven women demonstrating caseness at one or two measurement points only. Six women demonstrated caseness at Month One and four women (two of whom were demonstrating caseness for the first time) demonstrated caseness at Month Six.

Of the women demonstrating EPDS caseness, six (19.4% of total sample) also demonstrated HAD Scale (Anxiety sub-scale) caseness at a minimum of one measurement point. Of these, two women (Case No.'s 15 and 18 [Control Condition]) demonstrated caseness on both measures at the same four consecutive measurement points (Month One-Month Six).

TABLE 5.13

EPNDS: Caseness by Measurement Point
(Raw Scores)
(n= 10 women)

CASE NO.	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
11		14		15	
13		12			
15	14	16	15	18	
18	23	14	14	14	
30	12				14
42	14				
46					17
47					26
60	21	15	16	22	18
62	12			12	

b) Relationship Well-Being Measures

i) Communication Scale (CS)

Table 5.14 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the CS. (Higher scores indicated higher perceived couple communication.)

In examining the raw data, it was observed that mean scores and median scores obtained by women at each measurement point in the Control and Discussion Conditions were higher than those obtained by men in these Conditions, while in the Workbook-Only Condition and the Lecture Conditions, this trend was reversed.

Over time (Baseline-Month Six), some minor variation in scores was observed, principally among the men: mean and median scores obtained by men in each Condition decreased (or, as observed in the median scores obtained by men in the Discussion Condition, remained unchanged.)

ii) Dyadic Adjustment Scale (DAS)

Affection

Table 5.15 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the DAS: Affection. (For each DAS sub-scale, higher scores indicated greater perceived adjustment.)

TABLE 5.14

CS: Mean Scores/Standard Deviations/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	21.1	23.4	21.5	21.5	20.6	21.5
	s.d. =	8.05	9.2	8.8	9.4	8.4	9.6
	med =	19	24	18	20	20	23
Men	m =	19.1	19.7	20.0	20.3	18.6	18.0
	s.d. =	5.1	6.4	6.7	.75	8.5	8.4
	med =	19	20	20	18	19	18
Workbook							
(n = 7 couples)							
Women	m =	16.4	15.2	16.4	14.4	16.0	16.5
	s.d. =	6.3	4.2	6.4	5.4	3.4	6.9
	med =	16	17	14	13	17	15
Men	m =	20.8	21.6	16.0	19.8	20.2	19.6
	s.d. =	7.4	7.9	5.5	7.8	7.3	10.1
	med =	21.5	21.5	16	18	19	17

TABLE 5.14 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	17.0	16.6	18.8	16.8	16.2	17.1
	s.d. =	5.0	4.1	7.1	5.2	4.4	5.1
	med =	18	17	19	16	17	18
Men	m =	23.0	22.5	21.8	21.7	22.0	20.2
	s.d. =	8.2	8.8	8.3	10.4	8.6	7.5
	med =	22	20	20	22	23	19
Discussion (n = 5 couples)							
Women	m =	25.2	32.0	29.6	31.0	27.8	25.4
	s.d. =	11.8	3.2	7.1	10.2	11.1	9.6
	med =	22	32	30	34	33	25
Men	m =	23.0	25.0	22.2	23.4	24.2	21.6
	s.d. =	10.3	7.8	4.0	5.1	6.5	2.1
	med =	21	23	24	24	22	21

TABLE 5.15

DAS-Affection: Mean Scores/Standard Deviations/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	9.4	9.1	9.2	9.7	9.8	9.8
	s.d. =	1.8	2.0	2.0	2.2	1.9	1.6
	med =	9	8	9	10	10	10
Men	m =	10.0	9.8	9.8	9.3	9.5	9.1
	s.d. =	1.7	2.1	1.6	1.6	1.9	2.7
	med =	10	10.5	10	10	10	10
Workbook							
(n = 7 couples)							
Women	m =	9.0	10.1	9.7	9.7	9.6	9.7
	s.d. =	2.3	1.2	1.2	1.8	1.7	1.7
	med =	9	11	9	10	10	10
Men	m =	9.6	9.1	9.7	10.0	9.7	9.6
	s.d. =	.78	1.2	1.4	.57	1.9	1.4
	med =	9	9	10	10	10	10

TABLE 5.15 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	9.8	10.0	10.0	10.1	9.8	9.8
	s.d. =	.99	1.2	1.6	1.5	1.4	1.2
	med =	9	9.5	10.5	10	10	10
Men	m =	10.0	10.1	9.5	9.5	9.7	9.4
	s.d. =	2.2	1.3	2.2	1.9	1.6	1.6
	med =	11	10	10	10	10	10
Discussion (n = 5 couples)							
Women	m =	9.0	7.8	10.4	9.0	9.2	8.8
	s.d. =	2.4	2.2	3.9	2.1	1.6	1.3
	med =	8	8	9	9	9	8
Men	m =	8.4	7.4	9.0	8.4	8.8	9.0
	s.d. =	2.2	2.9	1.8	1.9	2.2	2.2
	med =	7	7	9	9	9	9

In examining the raw data, there appeared to be negligible differences among mean and median scores between genders and among Conditions at Baseline and Month Six.

DAS: Cohesion

Table 5.16 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the DAS: Cohesion.

In examining the raw data, it was observed that mean scores obtained by men were marginally higher than those obtained by women in each Condition except the Workbook-Only Condition, where the mean scores obtained by men and women were roughly approximate. At Month Six, mean scores obtained by men remained marginally higher than those obtained by women in each Condition except the Lecture Condition, where the observed trend was reversed. Among the median scores, a very similar pattern of scores was observed.

DAS: Consensus

Table 5.17 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the DAS: Consensus.

In examining raw data, it was observed that the differences in mean scores between men and women in each Condition at Baseline were minimal, except in the Discussion Condition, where mean scores obtained by women were larger than those obtained by men.

TABLE 5.16

DAS-Cohesion: Mean Scores/Standard Deviation/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	16.22	14.4	15.5	15.5	15.2	15.1
	s.d. =	3.1	2.4	1.4	1.9	2.4	2.3
	med =	16	14	15	15	16	15
Men	m =	17.1	15.8	15.8	16.0	15.7	15.8
	s.d. =	5.6	3.0	2.9	2.2	2.1	1.7
	med =	17	16	15	15	16	16
Workbook							
(n = 7 couples)							
Women	m =	16.6	16.5	16.4	15.7	16.4	15.7
	s.d. =	3.9	3.9	3.4	3.0	4.0	7.5
	med =	16	17	16	15	16	16
Men	m =	16.4	16.5	17.1	17.4	18.4	17.4
	s.d. =	3.9	3.5	2.8	3.7	3.5	4.3
	med =	19	16	18	16	20	17

TABLE 5.16 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	16.5	15.5	15.5	16.6	14.6	16.3
	s.d. =	2.6	2.2	2.4	1.6	1.6	2.3
	med =	16.5	15.5	15	17	15	16.5
Men	m =	17.8	15.6	16.5	16.5	15.3	15.8
	s.d. =	3.0	3.8	3.7	3.7	3.4	4.3
	med =	17.5	15	15.5	16	16	15
Discussion (n = 5 couples)							
Women	m =	13.6	14.6	14.0	14.6	15.2	14.8
	s.d. =	3.5	5.0	4.1	5.3	3.6	3.0
	med =	16	16	16	14	16	16
Men	m =	15.0	15.6	16.0	16.4	16.0	17.2
	s.d. =	2.6	5.5	5.5	5.1	5.0	5.2
	med =	16	16	15	16	15	16

TABLE 5.17

DAS-Consensus: Mean Scores/Standard Deviation/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	51	48.7	49.2	51.2	51.2	49.7
	s.d. =	4.2	5.3	5.9	5.4	5.9	6.9
	med =	52	49	49	51	50	50
Men	m =	50.6	52.5	52.4	50.0	51.5	53.4
	s.d. =	4.2	3.6	4.6	5.4	4.5	5.5
	med =	50	52	53.5	50	50.5	54.5
Workbook							
(n = 7 couples)							
Women	m =	49	50.6	55.3	52.7	51.7	47.0
	s.d. =	5.1	4.8	5.4	7.8	6.3	15.1
	med =	48	51	53	52	52	49
Men	m =	48.1	49.3	51.8	51.6	52.1	49.7
	s.d. =	3.4	4.1	3.8	2.4	5.4	6.4
	med =	49	50	52	52	53	48

TABLE 5.17 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture							
(n = 10 couples)							
Women	m =	51.9	51.6	53.2	55.4	54.1	53.7
	s.d. =	6.6	5.1	6.6	6.9	7.1	6.1
	med =	53	53	51	55	53	53
Men	m =	52.3	53.1	52.6	51.6	50.9	53.3
	s.d. =	6.5	6.4	6.5	6.9	7.9	6.0
	med =	50	51	52	52	51	51
Discussion							
(n = 5 couples							
Women	m =	48.2	43.8	49.2	52.8	52.8	53.2
	s.d. =	8.9	9.3	5.4	6.0	7.2	4.9
	med =	51	46	47	53	49	53
Men	m =	44.8	45.0	49.0	49.0	48.8	49.8
	s.d. =	7.2	11.8	6.7	5.2	5.3	3.6
	med =	47	44	49	47	48	50

At Month Six, the differences in mean scores between genders had increased, with men obtaining higher scores in the Controland Workbook-Only Conditions, and women obtaining higher mean scores in the Discussion Condition. At Month Six, mean scores obtained by men and Women in the Lecture Condition were roughly approximate.

Satisfaction

Table 5.18 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the DAS: Satisfaction.

In examining the raw data, scores obtained by men and women were roughly comparable in each Condition at each measurement interval. Over time (Baseline to Month Six), scores for both genders in each Condition remained essentially stable. However, in the Discussion Condition, scores obtained by men increased from Baseline to Month Six.

Total

Table 5.19 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the DAS: Total.

In examining the raw scores, gender differences were, once again, observed. At Baseline, mean and median scores obtained by women tended to exceed those

TABLE 5.18

DAS-Satisfaction Sub-Scale: Mean Scores/Standard/Deviations/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	42.3	42.5	41.6	42.0	41.7	40.4
	s.d. =	3.7	2.8	3.4	3.5	2.6	3.9
	med =	9	8	9	10	10	10
Men	m =	41.8	42.2	42.0	42.8	41.4	38.8
	s.d. =	3.2	3.2	4.1	2.9	3.2	5.3
	med =	10	10.5	10	10	10	10
Workbook							
(n = 7 couples)							
Women	m =	42.6	41.8	42.6	42.1	39.5	42.5
	s.d. =	3.7	3.4	4.0	2.8	9.7	4.4
	med =	9	11	9	10	10	10
Men	m =	40.8	40.1	40.3	40.7	40.0	39.3
	s.d. =	3.0	4.8	3.9	3.4	5.3	6.1
	med =	9	9	10	10	10	10

TABLE 5.18 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture							
(n = 10 couples)							
Women	m =	45.7	43.7	44.2	43.8	38.7	45.5
	s.d. =	2.3	2.6	3.0	3.8	8.3	3.8
	med =	9.5	9.5	10.5	10	10	10
Men	m =	42.3	43.1	43.4	41.3	42.4	42.2
	s.d. =	4.9	4.8	4.6	5.8	5.3	5.8
	med =	11	10	10	10	10	10
Discussion							
(n = 5 couples)							
Women	m =	38.4	34.6	35.8	36.4	37.0	38.6
	s.d. =	6.6	4.9	3.1	5.4	5.5	2.6
	med =	8	8	9	9	9	8
Men	m =	36.6	36.2	40.0	39.6	39.4	39.0
	s.d. =	8.6	6.7	5.0	3.5	2.8	5.2
	med =	7	7	9	9	9	9

TABLE 5.19

DAS-Total: Mean Scores/Standard Deviations/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n= 31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	119.0	114.8	115.6	118.5	118.0	115.2
	s.d. =	6.7	8.8	9.2	10.2	8.4	11.6
	med =	119	116	112	118	119	112
Men	m =	120.3	120.8	120.5	118.4	118.6	117.1
	s.d. =	10.7	9.4	10.3	11.1	9.2	10.7
	med =	120	121	122	118	119	118
Workbook							
(n = 7 couples)							
Women	m =	117.0	119.1	124.0	120.2	117.3	119.8
	s.d. =	6.4	10.1	10.8	13.0	14.3	19.6
	med =	119	114	127	119	120	118
Men	m =	115.0	115.2	119.0	119.7	120.3	116.0
	s.d. =	7.4	10.7	6.5	4.7	10.7	14.5
	med =	110	115	121	120	125	119

TABLE 5.19 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	124.8	121.4	122.5	126.8	118.0	126.3
	s.d. =	6.9	7.1	13.2	10.1	13.2	10.2
	med =	126	121	127	129	119	129
Men	m =	122.3	122.3	122.5	119.3	118.3	122.2
	s.d. =	15.3	12.8	12.5	14.7	16.3	16.3
	med =	125	127	123	116	116	123
Discussion (n = 5 couples)							
Women	m =	109.2	100.8	109.4	112.8	113.0	115.4
	s.d. =	20.3	13.9	11.2	10.1	14.4	8.7
	med =	115	100	115	111	105	114
Men	m =	104.8	104.2	114.0	113.4	111.0	115.0
	s.d. =	17.3	21.7	15.6	13.9	13.7	12.8
	med =	105	98	112	114	115	117

obtained by men across Conditions and, at Month Six, this trend persisted. A reversal of this observation was apparent in the Control Condition at both measurement points.

iii) Marital Role Inventory (MRI)

Table 5.20 presents mean scores, standard deviations and median scores obtained by women and men in each Condition at each measurement point on the MRI. (Higher scores indicated greater dissatisfaction with spouse's current role performance.)

In examining the raw data, it was observed that mean and median scores obtained by women in each Condition were higher than those obtained by men at each measurement point. Further, it was observed that there was a large increase in both mean/median scores for both genders in each Condition between Baseline and Month One.

iv) Relationship Well-Being Measures: Correlations

In order to examine statistical associations among the Relationship Well-Being Measures, the Pearson correlation (r) was employed. A parametric test of correlation was chosen as the experimental data were measured on interval data and there were no a priori reasons to assume that the requirements for the use of parametric tests were significantly violated. (For each analysis, significance was established as $p \leq .05$.) In examining correlation between scores obtained among the entire sample at Baseline on the Communication Scale and the Marital Role Inventory, a non-significant correlation was observed ($r = -0.156$, $p = .239$).

TABLE 5.20

MRI: Mean Scores/Standard Deviations/Median Scores
Per Condition Per Gender (Baseline-Month Six)
(n=31 couples)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Control							
(n = 9 couples)							
Women	m =	51.2	59.8	65.4	60.1	63.2	68.2
	s.d. =	2.1	6.3	4.1	6.1	4.8	3.2
	med =	50	61	67	58	63	68
Men	m =	46.0	57.7	57.1	58.8	56.1	64.7
	s.d. =	4.0	5.9	5.9	7.2	5.5	4.4
	med =	46	57	58	61	56	64
Workbook							
(n = 7 couples)							
Women	m =	50.1	61.1	60.8	61.6	64.4	63.0
	s.d. =	2.8	7.8	8.4	8.0	8.0	2.5
	med =	49	60	58	60	63	63
Men	m =	45.5	58.3	57.0	58.3	59.3	61.9
	s.d. =	4.1	5.0	3.7	4.6	4.3	1.5
	med =	47	57	55	59	59	62

TABLE 5.20 (Cont.)

Condition		B/Line	Month One	Month Two	Month Three	Month Four	Month Six
Lecture (n = 10 couples)							
Women	m =	50.1	61.7	63.5	65.8	64.8	63.8
	s.d. =	2.2	6.5	3.5	4.6	4.7	6.1
	med =	49	64	64	64	63	64
Men	m =	45.3	59.0	57.6	61.5	62.1	63.4
	s.d. =	4.1	5.2	5.6	5.8	3.9	4.6
	med =	45	61	58.5	63	63	63
Discussion (n = 5 couples)							
Women	m =	54.4	66.8	74.2	75.0	72.8	72.2
	s.d. =	6.5	8.7	6.8	8.3	7.9	7.4
	med =	53	63	70	72	69	69
Men	m =	47.4	60.4	61.2	60.4	60.4	60.2
	s.d. =	8.3	5.7	5.7	8.0	7.5	5.8
	med =	47	60	61	60	63	60

Table 5.21 presents the results of Pearson correlation (r) between scores obtained among the entire sample at Baseline on the Communication Scale and each sub-scale of the Dyadic Adjustment Scale.

TABLE 5.21

Pearson Correlation (r) per Communication Scale and the Dyadic Adjustment Scale at Baseline
(n= 62 participants)

DAS	CS	
	R	P
Affection sub-scale	-0.4952	.001
Cohesion sub-scale	-0.3024	.017
Consensus sub-scale	-0.5763	.001
Satisfaction sub-scale	-0.6521	.001
Total sub-scale	-0.7156	.001

As noted in Table 5.21, significant correlations were observed between the Communication Scale and each sub-scale of the Dyadic Adjustment Scale at Baseline.

Table 5.21 presents the results of Pearson correlation (r) between scores obtained among the entire sample at Baseline on the Marital Role Inventory and each sub-scale of the Dyadic Adjustment Scale.

TABLE 5.22

Pearson Correlation (r) per Marital Role Inventory and the Dyadic Adjustment Scale at Baseline
(n= 62 participants)

DAS	MRI	
	r	P
Affection sub-scale	-0.1185	.359
Cohesion sub-scale	-0.0373	.774
Consensus sub-scale	-0.2298	.10
Satisfaction sub-scale	-0.1850	.150
Total sub-scale	-0.2186	.10

As noted in Table 5.22, there were no significant correlations observed between the Marital Role Inventory and any of the sub-scales of the Dyadic Adjustment Scale at Baseline.

c) HAD Scale (Anxiety sub-scale/DAS (Total sub-scale): Observations in Individual Scores

In order to guide the decision regarding the use of parametric vs. non-parametric statistical tests for the Main Study, it was considered essential to examine the dispersion among individual scores obtained per participant per Condition on each principle measure at each measurement point in the Pilot Study. Clearly, it was anticipated that this examination would provide a visual indication of the variance among scores. To enable this process, a series of graphs were constructed.

Once constructed and examined, it became apparent that there were two patterns of dispersion among scores and that these patterns differed between Psychological Well-Being Measures and the Relationship Well-Being Measures. To illustrate these differences, scores obtained on one measure within each domain (HAD [Anxiety Scale] and DAS [Total Score]), will be presented and discussed.

HAD Scale (Anxiety sub-scale)

Figures 5.1-5.8 present scores obtained on the HAD (Anxiety) Scale by men and women in each Condition at each measurement point. ("Case Numbers" refer to the number assigned to each participant within each Condition.)

In examining these Figures, it appears that there was a wide dispersion among scores at each measurement point on Figures 5.1 and 5.5 (Control Condition), Figure 5.2 (Workbook Condition Females), Figure 5.7 (Lecture Condition Males) and Figures 5.4 and 5.8 (Discussion Condition). For Figure 5.6 (Workbook Condition Males) from Month Three-Month Six, and Figure 5.3 (Lecture Condition Females), there appears to have been less dispersion among scores. Some of the observed dispersion may be accounted for by "floor effects" which would be anticipated in a measure of morbidity among a "normal" population.

To statistically examine the homogeneity of variance among Conditions and between genders at each measurement point on this measure, the Bartlett Box-F statistic was employed. Table 5.23 presents Bartlett Box-F statistics per measurement point.

FIGURES 5.1-5.8

HAD Scale (Anxiety Sub-Scale) Baseline-Month Six

FIGURE 1: Control Females

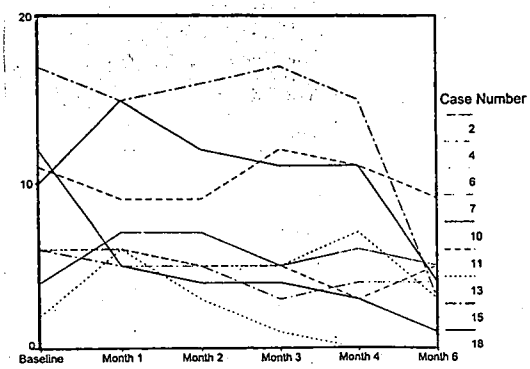


FIGURE 2: Workbook Females

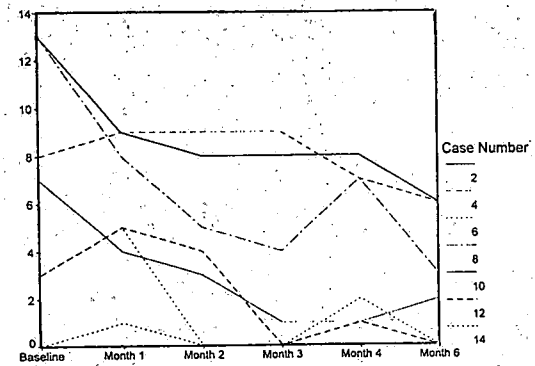


FIGURE 3: Lecture Females

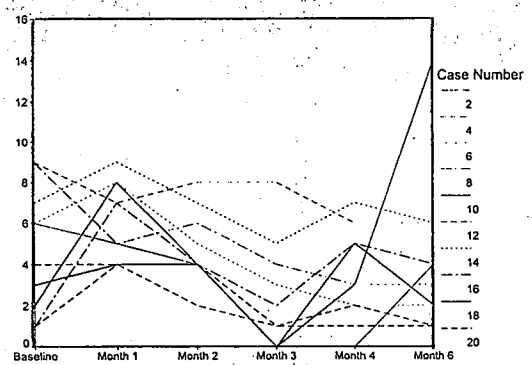


FIGURE 4: Discussion Females

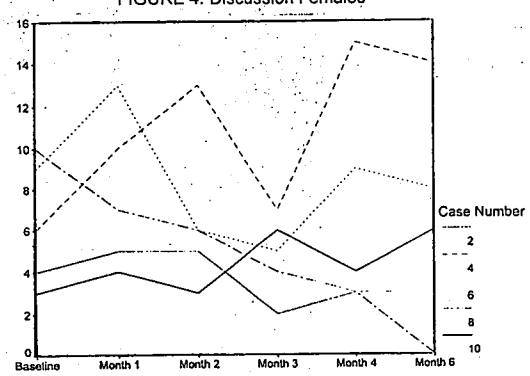


FIGURE 5: Control Males

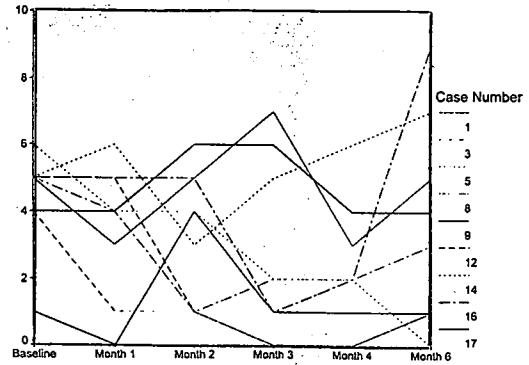


FIGURE 6: Workbook Males

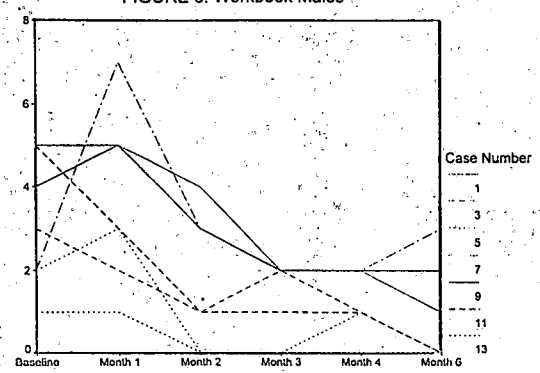


FIGURE 7: Lecture Males

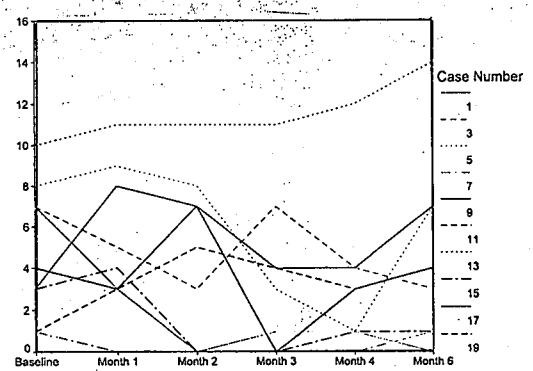


FIGURE 8: Discussion Males

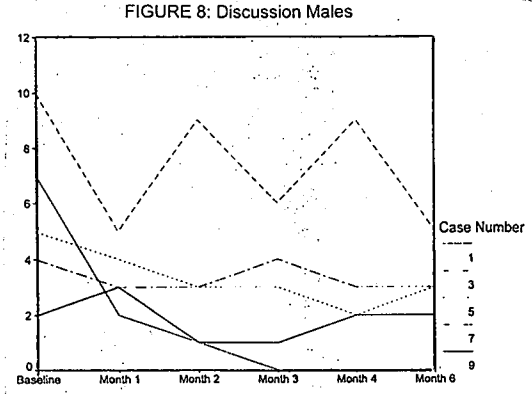


TABLE 5.23

HAD-Anxiety Sub-Scale: Bartlett Box-F Statistic
per measurement Point (Baseline-Month Six)

Measurement Point	F Statistic	P Value
Baseline	2.25	.027
Month One	1.83	.037
Month Two	1.96	.036
Month Three	2.48	.015
Month Four	3.08	.003
Month Six	1.98	.053

The results provided in Table 5.23 essentially support the visual analysis provided in Figures 5.1-5.8: the null hypothesis, suggesting that all population cell variances are equal, must be rejected.

DAS (Total sub-scale)

Figures 5.9-5.16 present scores obtained on the DAS (Total) Scale by men and women in each Condition at each measurement point.

In examining these Figures, the dispersion among scores at each measurement point was smaller, particularly on Figures 5.9 and 5.13 (Control Condition), Figure 5.14 (Workbook Condition Males), Figures 5.11 and 5.15 (Lecture Condition) and Figure 5.12 (Discussion Condition Females). (There were notable individual "outliers" on these Figures, particularly on Figures 5.9,

FIGURES 5.9-5.16

DAS (Total Sub-Scale) Baseline-Month Six

FIGURE 9: Control Females

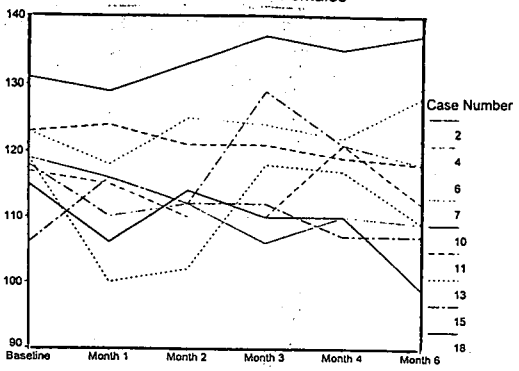


FIGURE 13: Control Males

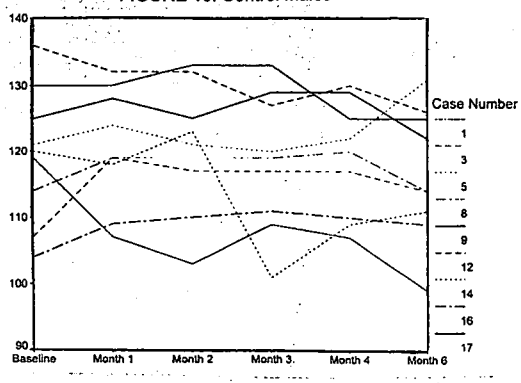


FIGURE 10: Workbook Females

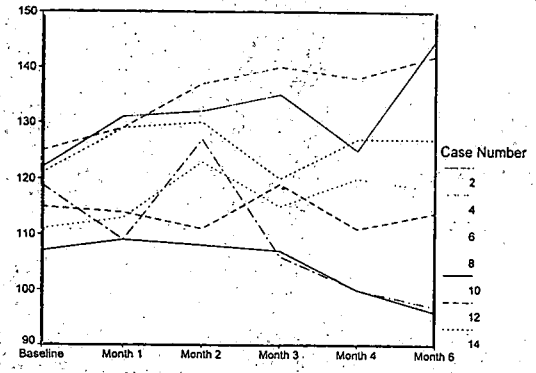


FIGURE 14: Workbook Males

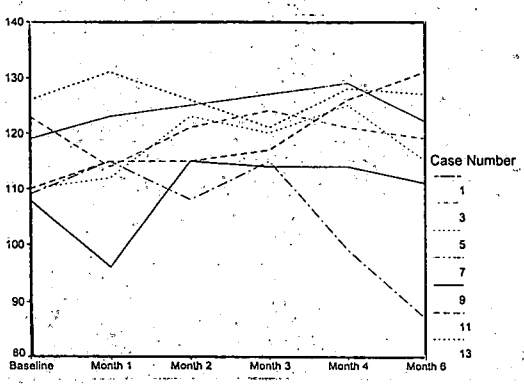


FIGURE 11: Lecture Females

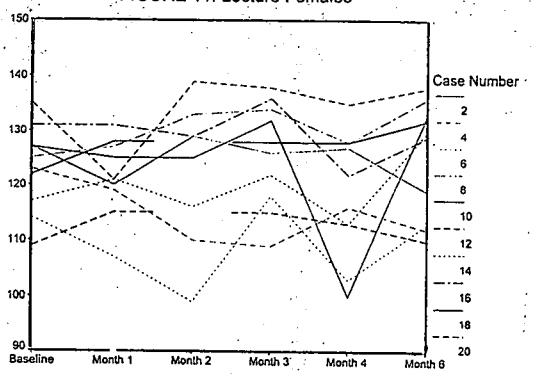


FIGURE 15: Lecture Males

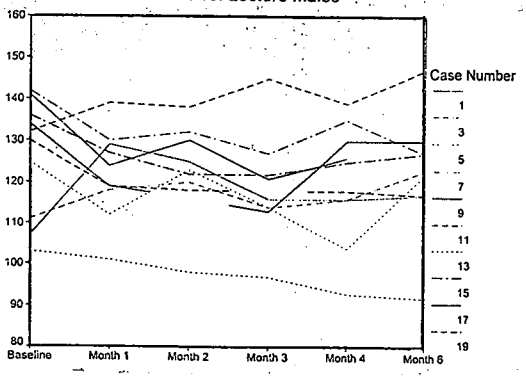


FIGURE 12: Discussion Females

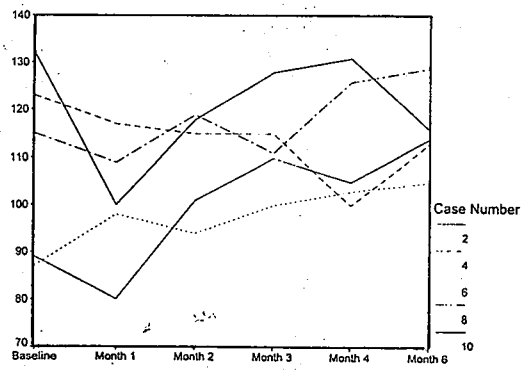
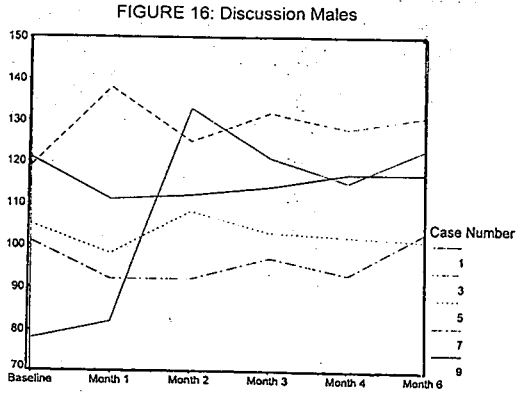


FIGURE 16: Discussion Males



5.14, 5.15.) On Figure 5.10 (Workbook Condition Females), there was notable dispersion of scores from Months 2-6, and on Figure 5.16. (Discussion Condition Males), this trend was reversed, with wider dispersion among scores observed between Baseline-Month Three.

Again, to statistically examine the homogeneity of variance among Conditions and between genders at each measurement point on this measure, the Bartlett Box-F statistic was employed. Table 5.24 presents Bartlett Box-F statistics per measurement point.

TABLE 5.24

DAS-Total Sub-Scale: Bartlett Box-F Statistic per Measurement Point (Baseline-Month Six)

Measurement Point	F Statistic	p value
Baseline	3.24	.022
Month One	1.30	.244
Month Two	.66	.703
Month Three	1.01	.421
Month Four	.63	.725
Month Six	.78	.602

Again, the results provided in Table 5.24 essentially support the visual analysis provided in Figures 5.9-5.16: the null hypothesis, suggesting that all population cell variances are equal, cannot be rejected.

V. DISCUSSION

The Pilot Study indicated that fifty per-cent of couples eligible to enter the study (n=40) were initially recruited, that participating couples found the experimental procedures and measures acceptable, suggested that scores obtained on the principle measures showed differences between genders and variation over time broadly corresponding to those observed in similar studies, and, further, demonstrated that an expected proportion of the sample obtained scores above "cut-off" on principle measures of psychological well-being

Participating couples were recruited into the Pilot Study over a four-month period. On the basis of recruitment to the Pilot Study, and projecting this recruitment rate over a two year period (projected maximum length of a larger study), 240 couples could be successfully recruited (60 couples per Condition). Of the 40 couples recruited into the Pilot Study, 9 couples dropped-out during the study period, representing an attrition rate of approximately 23%. Attrition is a consistent difficulty in studies of this nature, and the attrition rate observed in this instance is comparable to other similar studies in which attrition has been reported (Mrazek and Haggerty, 1994). On the basis of the attrition rate observed in the Pilot Study, and projecting at least a comparable rate of attrition over a two year period, 55 couples could be expected to leave a larger study, with 185 couples expected to progress through to completion (approximately 46 couples per Condition). This potential sample size equals or exceeds the sample size of other studies in the field (Shereshefsky and Yarrow, 1974; Neuman, unpublished manuscript; Meeker, unpublished manuscript; Cowan and Cowan, 1987; Parr, unpublished manuscript). Further, power calculations (Weiner, I970) suggest that for statistical significance of at least $p \leq 0.05$, 24 couples per Condition would be required. On the basis of recruitment and retention in the Pilot Study, it appeared that an appropriate sample size could be obtained for a larger study.

In considering the Pilot Study, there did not appear to be significant demographic differences between couples who completed the study and those

who did not. Of interest was the observation that couples in the "drop-out" sample were slightly older than couples who completed the study. However, there does not appear to be a clear explanation for this observed difference.

Although the same number of women (n=2) experienced either previous miscarriages or abortions in each group, the proportion of women experiencing a previous miscarriage (6.7%) or abortion (6.7%) in the completed group was smaller than the proportion of women who experienced a previous miscarriage (22%) or abortion (22%) in the "drop-out" group. Again, there do not appear to be compelling explanations for this observation. However, it will be worthwhile considering whether or not the same finding is observed with a larger sample.

Interestingly, the number of drop-outs per Condition was essentially identical (although the proportion of drop-outs per Condition was, obviously, not.) This may suggest that couples for whom investment in the study was greater (i.e. attendance at extra classes) were no more likely to leave the Study than other couples. Further, couples in both Conditions involving additional classes indicated comparable levels of satisfaction. Importantly, there was external procedural validation for each experimental intervention.

Data obtained on the Psychological Well-Being Measures revealed a similar pattern of findings to other studies (Dewi-Rees et al, 1971; Cox et al, 1982; Elliott et al, 1983; Cutrona, 1984; O'Hara et al, 1984; Atkinson and Rickel, 1989; Ballard et al, 1994). In general, for the HAD Scale (Anxiety sub-scale), differences in scores between genders were observed (with women obtaining higher mean and median scores), as was a decrease in scores for both genders over the study period. Approximately 29% (n=9) of the participating women demonstrated caseness at a minimum of one measurement point (with the majority of women demonstrating caseness at one measurement point only), while caseness was demonstrated in one man only. On the HAD Scale (Depression sub-scale) (employed with men only), the same man (and the only man in the sample to do so) demonstrated caseness. On the EPDS, there was, again, a decrease in scores observed over the measurement period, with 33.3% of the women demonstrating caseness at a minimum of one

measurement point. Again, the majority of participating women demonstrated caseness at one measurement point only. A minority of women in the study (n=2/6.5%) demonstrated caseness on both the HAD Scale (Anxiety sub-scale) and the EPDS at the same measurement points.

Few studies have compared the psychological well-being (as defined by the presence of psychological caseness) of women and men during the post-natal period. However, in those studies that have (Dewi-Rees et al, 1971; Atkinson and Rickel, 1989; Ballard et al, 1994) and consistent with the Pilot Study, women have demonstrated greater incidence of caseness than men. Further, and, again, consistent with other studies investigating changes in mood and mood content during the early post-natal months among women (Cox et al, 1982; Elliott et al, 1983; Cutrona, 1984; O'Hara et al, 1984; Fleming et al, 1990), the Pilot Study indicated a general improvement in psychological health among women over the post-natal period.

Where anxiety has specifically been considered among women in the post-natal period, caseness has been identified in up to 39% (n=31) of the sample within the first six post-natal months (Cooper et al, 1988). This finding exceeds observed anxiety caseness in the Pilot Study. However, a different measure was used to the HAD Scale and sampling differences may account for the lower incidence of anxiety observed in the Pilot Study.

As noted in Chapter Two, incidence and prevalence studies have varied widely in the estimation of post-natal depression (2.9%-14,9%) (Tod, 1964; Kumar and Robson, 1984; Campbell and Cohn, 1991). Particularly where caseness is defined in symptomatology rather than as a syndrome (as in the Pilot Study with the use of the EPDS), it has been argued that higher estimates of "depression" may be expected (Hopkins et al, 1984; O'Hara et al, 1984). (Once again, it must be noted that the EPDS is not a diagnostic instrument and that caseness indicates low mood at the time of measurement.)

As in the Psychological Well-Being Measures, data obtained on the Relationship Well-Being Measures in the Pilot Study also revealed a similar

pattern of findings to other studies. Where direct comparison between the Pilot Study and another study using the Communication Scale was possible (on scores obtained at Baseline) (James, 1991), scores obtained by women and men in each Condition were comparable to that study.

In studies examining stability and change in marital quality over the transition to parenthood, and in which the Dyadic Adjustment Scale (Spanier, 1976) has been used as a principle measure (Belsky et al, 1983; Belsky et al, 1985[a]; Terry et al, 1991), the most frequently observed findings are that marital satisfaction declines during the first three post-partum months, and that this change is more pronounced for women than for men. In the Pilot Study, differences in mean scores between genders were observed, although higher scores were not uniformly demonstrated by men (a finding also observed by Terry et al, 1991). In examining the scores obtained by women and men in the Control Condition, however, on three of the five subscales of the DAS (Total/Cohesion/Consensus) the expected trend was observed. Arguably, scores obtained by participants in the other Conditions may have been affected by the intervention. Further, and again among women and men in the Control Condition, there was a trend towards a decrease in scores from Baseline to Month Three on three of the five subscales (and on the same three subscales noted earlier).

On the Marital Role Inventory (Noller and Callan, 1988) the clear trend toward growing dissatisfaction with partner's role performance among women was entirely consistent with previous studies (Terry et al, 1991). An interesting observation in the Pilot Study, one worth observing closer with a larger sample, was the trend toward growing dissatisfaction with partner's role performance observed among men.

Although non-significant correlations were observed between the Marital Role Inventory and the Communication Scale and the Marital Role Inventory and the Dyadic Adjustment Scale, significant correlations were observed between the Communication Scale and the Dyadic Adjustment Scale. In a sense, this association is unsurprising: it appears intuitively likely that the proces of dyadic

adjustment would be associated with communication. Although this may indicate that the Communication Scale and the Dyadic Adjustment Scale are measuring essentially similar constructs and that one or the other questionnaire could be redundant, both questionnaires are essential. The Dyadic Adjustment Scale provides a broad index of relationship functioning which is required in this intervention context. Further, as the intervention explicitly seeks to promote communication among participating couples, a specific measure of perceived communication quality appears important. If statistically significant differences among Conditions are observed in a larger study, the association between these measures will require further consideration.

One of the purposes of the Pilot Study was to model statistical analysis for the larger "Main Study". As the analysis of the data obtained on the principle measures in the Main Study will, to a significant degree, depend on the measurements of the same variables on separate occasions among women and men in each Condition, the ANOVA statistical technique (Repeated Measures ANOVA) would appear to be appropriate. The reasons for this choice are: a) this technique imposes no restriction on the number of means to be compared in analysis, and, b) this technique can examine the effects of two (or more) independent variables simultaneously and provide information about the individual effects of each variable separately and the interactions among variables (Howells, 1987). ANOVA procedures depend on three major assumptions: a) that observations in each group come from a normal distribution, b) that the population variances of each group are the same, and, c) that the observations are independent of each other (Everitt, 1996).

Statistical advice was taken from Professor A. Bowman (University of Glasgow) and, in Professor Bowman's view, the ANOVA statistical technique would be the most appropriate choice for the Main Study. In the Pilot Study, the dispersion of scores on the HAD Scale (Anxiety sub-scale) and DAS (Total) were examined in detail, revealing differing patterns of dispersion, and, particularly for the HAD Scale, casting doubt on the possibility that the homogeneity of variance criteria would be adequately met to permit the use of the ANOVA statistical technique in a larger study. However, it has been noted

that "...analysis of variance is a very robust statistical procedure, and the assumptions frequently can be violated with relatively minor effects..." (Howell, 1987, p.297). Based on this observation and Professor Bownman's advice, the ANOVA statistical technique does appear to be the most appropriate method for a larger study.

The Pilot Study met the objectives for which it was designed and provided useful indications and observations for a larger study. Importantly, the Pilot Study suggested that sufficient participants were likely to engage in a larger study (such that adequate statistical power could be achieved), that measures and procedures were acceptable to participants, and that the selected principle measures were appropriate and useful. Further, there was evidence to suggest that participating couples found the Pilot Study of interest. On the basis of the design of the Pilot Study, a large scale Main Study was undertaken.

CHAPTER SIX

THE PROMOTING PARENTHOOD PROJECT: THE MAIN STUDY

I. INTRODUCTION

Following completion of the Pilot Study and on the basis of findings obtained in that exploratory context, the Main Study was undertaken between August, 1995 and August, 1997.

II. METHODS

1. DESIGN

The Pilot Study validated the general design and, hence, to reiterate, the Main Study was a comparative outcome, between-subjects design in which the independent variable was Anticipatory Guidance. Again, there were four Treatment Conditions: i) Directed Anticipatory Guidance (Lecture Condition) (ante-natal classes employing a lecture format and accompanying Workbook), ii) Non-Directed Anticipatory Guidance (Discussion Condition) (ante-natal classes employing a group discussion format), iii) Workbook Only Condition (provision of written information only), and, iv) Control Condition. The dependent variable was individual/couple psychological adjustment in the first six post-natal months following the birth of a first baby as measured by selected standard questionnaires. It was predicted that new parents in the Lecture Condition would achieve significantly greater individual/couple adjustment during the transition to parenthood than new parents in the other Conditions.

2. PARTICIPANTS

i) INCLUSION AND EXCLUSION CRITERIA

Exactly the same inclusion and exclusion criteria applied to the Pilot Study were applied to the Main Study. (Inclusion criteria: co-habiting and married couples expecting singleton babies and attending Parentcraft Classes in Ayr and Prestwick; exclusion criteria: individuals with diagnosed psychiatric illness, single parents, couples expecting twins, triplets, etc. and couples expecting second or subsequent babies (See page: 141).

ii) RECRUITMENT

For each Condition in the Main Study, couples were recruited at Heathfield Clinic (Ayr) and Boyd Street Clinic (Prestwick) at the first Parentcraft Class of each set of couples Parentcraft Classes held between August, 1995, and August, 1997. There were forty sets of Parentcraft Classes held during this period: 20 sets of Classes were held at each base. During the Main Study period, a total of 716 couples were invited to attend the Classes; of this number, 431 couples attended (60.1%) and, of that number, 171 couples (36.7%) were recruited into the study.

The number of couples invited to attend Parentcraft Classes at each base was roughly comparable: 368 couples (51% of total) were invited to attend Classes at Heathfield; 348 couples (49% of total) were invited to attend Classes at Boyd Street. The number of couples attending Classes at each base was also comparable: 212 couples (57.6% of couples invited) at Heathfield and 219 couples (62.9%) at Boyd Street. Further, the number of couples recruited into the Main Study at Boyd Street (n=92 couples/42%) was roughly comparable to the number of couples recruited at Heathfield (n=79 couples/37.3%). Table 6.1 presents information on the number of invitations offered, number of couples attending and number of couples recruited into the Main Study per Condition

and base. As in the Pilot Study, couples from both bases were considered as an homogenous sample.

TABLE 6.1

Number of couples who were invited to Parentcraft Classes, who then attended and who were subsequently recruited into the Main Study by Condition and Base

Cond.	H/field Invited	Attend	Recruit	P/wick Invited	Attend	Recruit
Control	85	42	20	83	53	13
Discuss	90	50	18	92	54	31
Lecture	92	52	21	98	61	26
W/Book	101	68	20	75	51	22
Total	368	212	79	348	219	92
		(57.6%)	(37.3%)		(62.9%)	(42%)

iii) PARTICIPANT DEMOGRAPHICS

One hundred and twenty-three couples completed the Main Study, indicating an attrition rate of 28% of the total number of couples initially recruited (n=171 couples). Of the couples completing the Main Study, 57 couples (46%) had been recruited from Heathfield and 66 couples (54%) had been recruited from Boyd Street. Among this sample, there were 31 couples in the Control Condition, 28 couples in the Workbook-Only Condition, 33 couples in the Lecture Condition and 31 couples in the Discussion Condition.

a) Age

The mean age for women in this sample was 29.4 yrs. (s.d.=4.4 yrs.) and the mean age for men was 31.3 yrs (s.d.=5.3 yrs.). (The mean age for women in Britain having a first baby is 29 years [OPCS, 1993].) Table 6.2 presents mean ages, standard deviations and median ages for men and women in each Condition.

Examination of Table 6.2 suggested that, for each Condition, mean ages for women appeared slightly younger than mean ages for men. However, across Conditions, the mean ages for women were roughly comparable, as were the mean ages for men.

A 4 (Condition) by 2 (gender) ANOVA was employed to statistically examine differences in ages per Condition and gender. There was a significant main effect of gender (d.f.=1, 238; F=9.2; p=.003). Men in the sample were significantly older than the women. However, there was no significant main effect of Condition (d.f.=3, 238; F=1.7; p=.167), nor was there a significant Condition by gender interaction effect (d.f.=3, 238; F=.02; p=.996).

TABLE 6.2

Mean Ages/Standard Deviations/Median Ages
per Gender per Condition
(n=123 couples)

Condition	Males (ages in years)	Females (ages in years)
Control (n=31 couples)		
mean	30.1	28.3
s.d.	4.7	3.9
median	30	28
Discussion (n=31couples)		
mean	31.7	29.9
s.d.	4.3	5.0
median	31	30
Lecture (n=33 couples)		
mean	31.5	29.4
s.d.	6.4	4.1
median	31	29
Workbook (n=28 couples)		
mean	32.0	30.2
s.d.	5.6	4.5
median	32	30.5
Total sample (n = 123 couples)		
mean	31.3	29.4
s.d.	5.3	4.4
median	31	29

b) Marital Status

Of the couples completing the Main Study (n=123 couples), one hundred and seven couples (87%) were married and sixteen couples (13%) were cohabiting.

For the married couples, the mean number of years married was 3.8 yrs. (s.d.=3.5 yrs.); for the cohabiting couples, the mean number of years cohabiting was 2.0 yrs. (s.d.=2.2 yrs.). Table 6.3 presents marital status information (percent married or cohabiting; number of years married or cohabiting) per Condition.

Examination of Table 6.3 suggested that a majority of couples in each Condition were married, and that the mean number of years married was roughly comparable across Conditions. Interestingly, of the co-habiting couples, couples in the Workbook-Only Condition appeared to have been co-habiting for a considerably longer period of time than co-habiting couples in other Conditions.

Two One-Way ANOVA's were employed to examine differences in number of years married and number of years cohabiting per Condition. Where significant differences among groups were observed (number of years co-habiting), the Tukey HSD was employed as a post-hoc test.

For the married sample, there were no significant differences in mean length of marriage among Conditions (d.f.=3, 210; F=.62; p=.6). However, for the co-habiting sample, there were significant differences in mean length of co-habitation among Conditions (d.f.=3, 28; F=31.7; p=.001). Post-hoc testing indicated that the mean length of co-habitation among couples in the Workbook-Only Condition (m=7.0 yrs.; s.d.= 0.1 yrs.) was significantly longer than couples in any other Condition. (There were no significant differences in mean length of co-habitation among couples in the other Conditions.)

TABLE 6.3

Marital Status Data (percentage married/cohabiting; number of years married/cohabiting) per Condition (n=123 couples)

Condition	No. & % Married	Years married	No. & % Living Together	Years co-habiting
Control (n=31 couples)	26 (83.9%)	mean 3.9 s.d. 3.2 median 3	5 (16.1%)	mean 1.6 s.d. 1.4 median 1.1
Discussion (n=31 couples)	26 (83.9%)	mean 3.9 s.d. 3.8 median 2.1	5 (16.1%)	mean 1.5 s.d. 1.3 median 2.0
Lecture (n=33 couples)	29 (87.9%)	mean 3.3 s.d. 3.2 median 3	4 (12.1%)	mean 0.8 s.d. 0.4 median 1.0
W/Book (n=28 couples)	26 (92.9%)	mean 4.1 s.d. 3.8 median 2.1	2 (7.1%)	mean 7.0 s.d. 0.1 median 7.0

c) Employment Status

The majority of participants in the Main Study (n=223 individuals/ 90.6%) were employed. Of the female participants, 117 (95%) were employed, as were 106 (86%) of the men. There were two couples (1.6%) in the sample in which both partners were unemployed (one couple in the Control Condition and one couple in the Lecture Condition). At Month Six (completion of the study period), 54.7% (n=64) of the women who had been employed had returned to work. (This figure is slightly lower than the 57% return rate reported by Parr [unpublished manuscript], the only other intervention study in which this information was available.) Table 6.4 presents data on employment status per participant and Condition.

As noted in Table 6.4, in both the Control and Discussion Conditions, there were slightly higher (but non-significant) proportions of unemployment among participants than in the Lecture and Workbook-Only Conditions.

TABLE 6.4

Employment Status per Participant per Condition
(n=246 participants)

Employed	Control	Discussion	Lecture	W/Book	Total
Yes	54 (87.1%)	55 (88.7%)	61 (92.4%)	53 (94.6%)	223
No	8 (12.9%)	7 (11.3%)	5 (7.6%)	3 (5.4%)	23

d) Educational Status

Information regarding educational status among the sample was available for 223 individuals (90.6% of the entire sample). Table 6.5 presents data on educational status (highest level of education per participant) by Condition. Every participant had achieved at least O Grade or GCSE educational qualifications. As noted in Table 6.5, a larger number of participants in the Discussion Condition achieved degree-level qualifications than in other Conditions. However, by collapsing categories of Professional Qualification, HNC, HND, Degree and Other and comparing numbers of participants in this category with the A Level/Highers category across Conditions, there were no significant differences observed per Chi Square.

TABLE 6.5

Educational Status per Condition
(n=223 Participants)

Education	Control (n=56)	Discussion (n=55)	Lecture (n=60)	W/Book (n=52)
A Levels/ Highers	13	9	13	10
Prof.Qual.	18	14	17	17
HNC	7	7	7	7
HND	4	4	5	5
Degree	13	20	14	11
Other	1	1	4	2

e) Social Class

The socio-economic class of participants was defined on the basis of the male partner's occupation (HMSO, 1980). Information was available for 106 couples (86% of the sample). Table 6.6 presents data on social class per Condition. As observed in Table 6.6, the largest number of couples in each Condition were in Social Classes I and II (72.6% of the entire sample) and comparable numbers of couples in each Condition were represented in each Social Class.

TABLE 6.6

Social Class per Condition
(n=106 Couples)

Condition	Social Class				
	I	II	III	IV	V
Control (n=27 couples)	10	9	6	1	1
Discussion (n=27 couples)	12	7	4	3	1
Lecture (n=27 couples)	12	9	5	1	-
Workbook (n=25 couples)	11	7	4	2	1
Total	45	32	19	7	3
% of Total	42.4%	30.2%	18%	6.6%	2.8%

f) Obstetrical Data

For 100 couples (81.3%), the expected baby was "planned" and for 20 couples (16.3%), the baby had not been planned. (Interestingly, for 3 couples [2.4%], there was disagreement between the couples as to whether or not the baby had been planned.) Among the sample, 5 women (4.0%) had experienced previous abortions and 17 women (13.8%) had experienced previous miscarriages. Three women (2.4%) had experienced both a previous abortion and a previous miscarriage (two women in the Discussion Condition and one woman in the Workbook-Only Condition).

The average length of gestation at birth was 40 weeks (s.d.=1.7 weeks), with a range of 34-42 weeks.

All babies in the sample were born at Ayrshire Central Hospital, Irvine, Ayrshire. Twelve babies (9.7%) were delivered between 34-38 weeks gestation. Of this number, 5 babies were born to mothers in the Control Condition (16% of births in this Condition), 1 baby was born to a mother in the Workbook-Only Condition (3.5% of births), 3 babies were born to mothers in the Lecture Condition (9% of births), and 3 babies were born to mothers in the Discussion Condition (9.6% of births). It did not appear that any of these babies or mothers required extensive specialist nursing or medical care.

The average duration of labour (for 100 births [81%] where this information was available) was 9.2 hrs. (s.d.=3.6 hrs.), with a range of 2.5 hrs. to 18.5 hrs. Where information on the type of delivery was available (114 deliveries; 93%), 68 deliveries (59.6%) were SVD (Spontaneous Vertex Delivery), 30 deliveries were Caesarean Sections (26.4%) and 16 deliveries were Forceps Deliveries (14%).

In 1997, there were 3,993 live births at Ayrshire Central Hospital. Of these, 72% (n=2900) were SVD, 18.8% (n=750) were Caesarean Sections and 8.5% (n=343) were Forceps Deliveries (Sr. Graham, Senior Sister, Labour Suite, ACH, personal communication). In this study sample of primiparous mothers, there were higher proportions of Caesarean Sections and Forceps Deliveries performed. However, it must be noted that the birth statistics made available by ACH included all live births (among both prima and multiparous mothers).

Again, where information was available (115 deliveries; 94%), 52 boys (43%) and 63 girls (57%) were delivered.

g) "Drop-Out" Participants

Forty-eight couples did not complete the study: 40 couples "dropped-out", 7 couples did not meet inclusion criteria (non-cohabiting couples, couples expecting multiple births and couples for whom the anticipated baby was not a first baby for either the mother or the father) and one couple was withdrawn from the study at the request of a Community Midwife.

In order to examine differences among couples who completed the study and those who did not, the "drop-out" sample was considered in further detail. This sample (as opposed to the other eight couples who either did not meet inclusion criteria or were withdrawn from the study) began participating in the study but chose to leave the study after that initial participation. Of the 40 couples who "dropped out" of the Main Study, the number leaving each Condition/percentage of total number recruited per Condition was as follows: 5 couples left the Control Condition (15%); 14 couples left the Workbook-Only Condition (33%); 8 couples left the Lecture Condition (17%); and 13 couples left the Discussion Condition (26.5%). There was a clear variation in the proportion of "drop-outs" per Condition. However, per the Chi-Square Test, this variation did not reach statistical significance ($x2=5.12$; d.f.= 3; $p= 0.16$).

The majority of those couples who dropped out of the Study (25/62.5%) did so before returning Baseline data; the remaining couples (15/37.5%) left the Study before returning data at Month Three post-natal.

Table 6.7 compares the drop-out sample (n= 40 couples) with those couples who completed the Main Study (n= 123 couples) on selected demographic variables (age, marital status, employment status and obstetrical data).

As noted in Table 6.7, a smaller proportion of couples in the drop-out sample was married, a larger proportion of women in the drop-out sample was unemployed and a larger proportion of women in the drop-out sample had had

a previous abortion (an observation noted among the Pilot Study drop-out sample). Interestingly, a smaller proportion of couples in the drop-out sample indicated that the baby had been planned.

TABLE 6.7

Comparison of Completed Couples (n=123) with "Drop-Out" Couples (n=40) on Age/Marital Status/Employment Status/Obstetrical Data

Variable	Completed (n= 123 couples)	Drop out (n=40 couples)
Age (in years)		
Women	29.4 (s.d.=4.4)	28.9 (s.d.=4.7)
Men	31.3 (s.d.=5.3)	30.0 (s.d.=5.6)
Married	107 couples (87%)	28 couples (70%)
Cohabiting	16 couples (13%)	12 couples (30%)
Employed		
Women	106 individuals (87%)	29 individuals (72.5%)
Men	117 individuals (95%)	37 individuals (92.5%)
Unemployed		
Women	17 individuals (14%)	11 individuals (27.5%)
Men	6 individuals (5%)	3 individuals (7.5%)
Baby "Planned"	100 couples (81.3%)	28 couples (70%)
Miscarriages	17 women (14%)	0
Abortions	5 women (4.1%)	6 women (15%)

iv) Materials and Procedures

Identical materials (including the "Preparing for Parenthood" Workbook and standard measures) were used in the Main Study to those used in the Pilot Study. Additionally, the timing of measures remained unchanged in the Pilot Study and identical intervention procedures were employed. (See pages:151-159).

a) Procedural Validaton

As in the Pilot Study, video recordings were taken at classes in the Lecture and Discussion Conditions. Two five-minute video recordings were taken in each Condition, one recording per Condition per base (20 recordings). The recordings were taken of the researcher (MKR) and participants were not identifiable on any recording. The purpose of the recordings was to enable further external procedural validation through ensuring that personal qualities exhibited by the researcher were consistent in each Condition. Of the total number of recordings, ten recordings were selected at random (5 from each Condition) by a Research Assistant unfamiliar with the content of the recordings. Three Chartered Clinical Psychologists (who had not previously rated video recordings in the Pilot Study) were asked to view the recordings, in a randomised order (defined through the use of Latin Squares), and to rate the researcher on four personal qualities: warmth, friendliness, knowledge, confidence (adapted from the Empathy Scale-Patient's Version [Burns, 1989]) on a ten-point Likert scale devised for the study. The Psychologists were asked to view one recording per day over a fourteen day period, to refrain from reviewing ratings between sessions and to refrain from conferring with the other Psychologist-Raters. Each Psychologist Rater viewed each of the ten recordings as a single series, and individual recordings were not identified as being from one or the other Condition.

Table 6.8 presents median scores obtained among Psychologist-Raters for Lecture and Discussion Condition recordings per personal quality. As observed in Table 6.8, median scores for each personal quality were almost

identical, both between Conditions and across qualities (with the exception of the friendliness quality where a slighly larger median score was observed for the Lecture Condition recordings).

These observed scores appear to suggest that personal qualities demonstrated by the researcher (MKR) were consistent in each Condition. It must, however, be noted that with only three raters, this conclusion must be viewed with caution.

TABLE 6.8

Median Scores for Lecture/Discussion Condition Recordings per Rater per Researcher Personal Quality (n=3 Raters)

Condition	Warmth	Friendliness	Knowledge	Confidence
Discussion Median	8	8	8	8
Lecture Median	8	9	8	8

III. RESULTS

1. GENERAL PLAN OF ANALYSIS

The central hypothesis in this research was that new parents in the Lecture Condition would achieve significantly greater individual/couple adjustment during the transition to parenthood than new parents in the other Conditions. In order to investigate this hypothesis, three broad approaches to statistical analysis were undertaken and are presented here in three parts: Part One, Part Two and Part Three. In Part One, data obtained for each measure was analysed in order to investigate differences among individuals and among Conditions across measurement intervals. In Part Two, data obtained on four

measures (Hospital Anxiety and Depression Scale, Communication Scale, Dyadic Adjustment Scale, Marital Role Inventory) were re-analysed in order to investigate differences among couples and among Conditions across measurement intervals (a "couple score" was derived for this analysis and is explained in the introduction to Part Two). The rationale for the selection of these measures will be considered in the Plan of Analysis which prefaces Part Two. Finally, in Part Three, data obtained on three measures (Communication Scale, Dyadic Adjustment Scale, Marital Role Inventory) were re-analysed in order to investigate the effects of psychological morbidity (as a covariate and as defined by the Hospital Anxiety and Depression Scale) among individuals and among Conditions across measurement intervals on these measures. The rationale for the selection of these measures in this analysis will be considered in the Plan of Analysis which prefaces Part Three.

2. PLAN OF ANALYSIS: PART ONE

Measures have been grouped in relation to the theoretical domains of the transition to parenthood to which they relate: Psychological Well-Being Measures (Crown-Crisp Experiential Index, State Trait Anxiety Inventory, Hospital Anxiety and Depression Scale, Edinburgh Post-Natal Depression Scale); Relationship Well-Being Measures (Communication Scale, Dyadic Adjustment Scale, Marital Role Inventory); Pregnancy Well-Being Measures (Support in Pregnancy Questionnaire, Maternal Adjustment and Maternal Attitudes Questionnaire); Social Support Measure (Family Support Scale); and Coping Measures (Coping Effectiveness Scale, Parenting Stress Index). Specific considerations regarding the statistical analysis of data within each theoretical domain will be discussed preceding the presentation of findings in each domain. Following the presentation of findings in each domain, a summary of findings will be offered.

Within each domain, and for each measure, analysis of data began with examination of summary statistics, which are presented here in appropriate Tables. For all continuous variables, parametric tests (ANOVA: One-Way,

Simple Factorial, General Factorial or Repeated Measures) have been employed. The choice of parametric tests for the analysis was based both on results obtained in the Pilot Study and on the advice of Professor A. Bowman (University of Glasgow). Central to the use of parametric tests in the Main Study is "...the notion that total variability can be apportioned between different sources of variability" (Greene and D'Olivera, 1982).

The reasons for the selection of the ANOVA statistical technique for data analysis in the Main Study were noted in Chapter Five, but will be restated here: a) the ANOVA statistical technique imposes no restrictions on the number of means to be compared in analysis, and, b) it can examine the effects of two (or more) independent variables simultaneously, providing information about the individual effects of each variable separately and interactions among variables (Howells, 1987). The latter consideration is of importance in this context, where the relationships among Conditions/gender variables are of particular interest.

Again, as noted in Chapter Five, ANOVA procedures depend on three major assumptions: a) observations in each group must come from a normal distribution, b) population variances of each group are the same, and, c) observations are independent of each other (Everitt, 1996). For the data presented here, both normality and homogeneity of variance have been examined, and for each measure and sub-scale, the results of appropriate homogeneity of variance tests are reported in Appendix One.

As this study depends, to a significant degree, on the measurement of the same variable on separate occasions, Repeated Measures ANOVA has been employed, where possible, with Condition and/or gender as between subjects factors and "time" as the within subjects factor. In addition to the previously noted assumptions regarding ANOVA, there is an additional critical assumption regarding Repeated Measures ANOVA: sphericity. Sphericity "...requires that the variance of the difference between all pairs of repeated measurements are equal. The condition requires that the correlations between pairs of repeated measures are also equal, the so-called compound symmetry pattern of

correlation. In addition, sphericity must hold in all levels of the between-subjects part of the design" (Everitt, 1996, p. 123). Violation of the sphericity assumption leads to an increase in Type I errors ("...rejecting the null hypothesis when it is true" [Bryman and Cramer, 1997, p.111]).

Results of the Mauchly's' Test of Sphericity are reported for those measures where the Repeated Measures ANOVA has been employed (Appendix Two). Where the sphericity assumption has been violated, correction factors have been applied per Huynh and Feldt (1976). The approach advocated by Huynh and Feldt is recommended over the approach advocated by Greenhouse and Geisser (1959), which is extremely conservative and prone to increasing Type II errors (Everitt, 1996). As noted by Bryman and Cramer (1997), "...A Type II error is accepting the null hypothesis when it is false"(p. 111).

As noted in Chapter Five, analysis for each measure has, largely, been conducted on "change scores" (derived, in this instance, by subtracting the raw score obtained per participant at each measurement point from the raw score obtained by that participant at Baseline).

In understanding variations in mean change scores per measure, it may be useful to consider the relationship between mean raw scores and mean change scores in this context. For each measure, the mean raw score obtained at Baseline was positive-signed. Therefore, where the mean change score obtained at each subsequent measurement was positive- signed, this indicated that the mean raw score at that measurement interval was smaller than the mean raw score obtained at Baseline (i.e. 10-5 = 5). Conversely, where the mean change score obtained at subsequent measurement intervals was negative-signed, this indicated that the mean raw score obtained at that measurement interval was larger than the mean raw score obtained at Baseline (i.e. 10-15 = -5). The magnitude of change from zero (which would indicate an absence of change) could, potentially, increase in either a negative or a positive direction.

The interpretation of the direction of the magnitude of change depended on the scoring method adopted for each measure. That is, if higher mean raw scores indicated greater symptomatology (e.g. HAD Scale), then negative-signed change scores were indicative of this negative variation from Baseline. Alternately, if, as for the DAS (Dyadic Adjustment Scale), higher mean raw scores indicated greater adjustment, then negative-signed change scores were indicative of this positive variation from Baseline.

Following One-Way and General Factorial Anova procedures, the Tukey HSD test was chosen for post-hoc testing. Although regarded as statistically conservative, the Tukey HSD Test is "...generally regarded as the best procedure for controlling the family-wise error rate" (Howells, 1987, p.352). The family-wise error rate contributes to an increase in Type I errors.

Following Repeated Measures ANOVA, the Studentised Range Statistic (q) was chosen for post-hoc testing. The first reason for the selection of this post-hoc test was pragmatic: the Tukey HSD is not available with the Repeated Measures ANOVA procedure on SPSS. The second reason for the choice of this test was that the Studentised Range Statistic has been specifically designed to examine differences in an ordered series of means guarding against an increased probability of Type I errors. Advice regarding the use of the Studentised Range Statistic was obtained from Dr. P. Kinnear (University of Aberdeen).

While the examination and interpretation of mean scores provides a useful indication of the changes in central tendencies of a sample, it clearly obviates individual experience. Therefore, in addition to the analysis of continuous variables, some of the Psychological Well-Being Measures (Hospital Anxiety and Depression Scale, Edinburgh Post-Natal Depression Scale) have also been treated as dichotomous variables. For these measures, "caseness" (a level of psychological morbidity thought to warrant intervention), which is specifically defined for each measure, has been reported for individual participants.

All statistical analysis was conducted per SPSS 6.1 for Windows. For each analysis, significance was established as $p \leq .05$.

3. STATISTICAL ANALYSIS

a) PSYCHOLOGICAL WELL-BEING MEASURES

i) Plan of Analysis

Measures within this domain included: the Crown-Crisp Experiential Index (CCEI), the State Trait Anxiety Inventory (STAI), the Hospital Anxiety and Depression Scale (HAD), and the Edinburgh Post-Natal Depression Scale (EPDS).

For each sub-scale of the CCEI, where scores were obtained at Baseline only, a series of 4(Condition) by 2(gender) ANOVA's were conducted to investigate differences among mean scores obtained by men and women per Condition. Similarly, for the STAI (Trait Anxiety), where scores were obtained at Baseline only, a 4(Condition) by 2(gender) Anova was conducted; for the STAI (State Anxiety), where scores were obtained at each measurement interval, initial analysis began with a 4(Condition) by 2 (gender) ANOVA to examine differences among mean raw scores per Condition/gender at Baseline. In subsequent analysis, Repeated Measures ANOVA, per change scores, was conducted to investigate differences among Conditions and between genders across measurement intervals. An identical analysis was conducted with the HAD (Anxiety Scale) scores.

For the HAD (Depression Scale), where only data obtained from the men were analysed at this stage, a One-Way ANOVA was conducted on raw scores obtained at Baseline to investigate differences among Conditions; subsequent analysis, per change scores, was conducted per a Repeated Measures ANOVA. For the EPDS, where scores were obtained among women only from

Month One to Month Six, Repeated Measures ANOVA was conducted per raw scores.

In each analysis where Repeated Measures ANOVA's were employed, the sphericity assumption had been violated (see: Appendix Two). Correction factors were applied to these analyses, therefore, as per Huynh and Feldt (1976). Further, where significant results were obtained per Repeated measures ANOVA analysis for main effects, the Studentised Range Statistic was employed as a post-hoc test (STAI [State], HAD [Anxiety/Depression sub-scales], EPDS).

Finally, for the HAD (Anxiety/Depression Scales) and the EPDS, caseness scores were visually inspected and this information is presented following the presentation of the results for each of these measures.

ii) Analysis

CCEI

Table 6.9 presents mean raw scores, standard deviations and median scores per sub-scale of CCEI for men and women in each Condition. Examination of Table 6.9 suggested that mean and median scores obtained by women exceeded those obtained by men on most sub-scales in each Condition.

TABLE 6.9

CCEI: Mean Scores/Standard Deviations/Median Scores per Sub-Scale per Condition per Gender at Baseline
(n = 123 couples)

CONDITION		A	D	H	O	P	S
CONTROL (n=31couples)							
WOMEN	m=	5.1	5.9	5.1	4.9	2.9	9.0
	s.d.=	3.3	2.1	2.6	2.7	1.8	2.5
	med=	4	6	5	5	3	9
MEN	m=	4.1	5.5	5.3	5.2	3.2	7.2
	s.d.=	3.3	2.8	2.1	2.9	1.9	1.6
	med=	3	5	5	5	3	7
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	6.8	7.3	5.2	6.1	3.7	8.6
	s.d.=	4.0	2.3	2.4	2.6	2.5	1.6
	med=	6	7	5	6	4	9
MEN	m=	3.9	5.5	5.1	4.6	4.3	7.3
	s.d.=	2.9	1.9	1.8	2.4	2.3	1.4
	med=	3	5	5	4	4	7

TABLE 6.9 (Cont.)

CONDITION		A	D	H	O	P	S
LECTURE (n=33 couples)							
WOMEN	m=	5.9	7.6	5.4	5.8	4.4	9.0
	s.d.=	3.2	2.1	2.5	2.4	2.5	2.3
	med=	5	7	5	5	4	9
MEN	m=	3.4	5.7	4.7	4.4	2.6	7.4
	s.d.=	2.7	1.9	2.3	2.0	1.8	1.9
	med=	3	5	5	4	2	8
DISCUSSION (n=31 couples)							
WOMEN	m=	4.8	6.6	4.9	5.4	3.3	9.0
	s.d.=	3.0	2.0	2.5	2.7	1.8	2.0
	med=	4	7	4.5	5	3	9
MEN	m=	2.9	4.8	5.0	5.0	3.3	7.3
	s.d.=	2.6	2.1	2.6	2.6	1.8	1.8
	med=	2	4	4.5	5	3	7

Key: A = Anxiety
D = Depression
H = Hysteria
O = Obsessionality
P = Phobic Anxiety
S = Somatic Concomitants of Anxiety

Table 6.10 presents the results of ANOVA statistical analysis per sub-scale. There were no significant main effects of Condition for any sub-scale, nor were there significant Condition by gender interaction effects. However, there were significant main effects of gender for four of the subscales: Anxiety, Depression, Obsessionality and Somatic Concomitants of Anxiety. Table 6.11 presents mean scores/standard deviations/median scores for the sub-scales of the CCEI in which significant gender differences were observed. For each of these sub-scales, mean scores obtained by women exceeded those obtained by men, indicating that women in the sample reported significantly greater levels of symptomatolgy on these sub-scales.

STAI

Trait Anxiety

Table 6.12 presents mean raw scores, standard deviations and median scores obtained per men and women in each Condition on the STAI (Trait Anxiety). For the Workbook-Only Condition and Lecture Conditions, mean scores and median scores obtained by women appeared to exceed those obtained by men, while in the Control and Discussion Conditions, this trend was essentially reversed. In analysis, however, there were no significant main effects of gender (d.f.=1, 238; F=2.9; p=0.1) or Condition (d.f.=3, 238; F=1.2; p=.317), nor was there a significant gender by Condition interaction effect (d.f.=3, 238; F=3.6; p=0.1).

State Anxiety

Table 6.13 presents mean raw scores, standard deviations and median scores obtained per men and women in each Condition on the STAI (State Anxiety). Scores obtained by men and women in each Condition appear roughly comparable across measurement points. For both genders and in each

TABLE 6.11

CCEI: Mean Scores/Standard Deviations/Median Scores Per Anxiety/Depression/Obsessionality/Somatic Concomitants of Anxiety Sub-Scales Per Gender
(n =123 couples)

GENDER	CROWN A	CROWN D	CROWN O	CROWN S
MALE				
mean =	3.6	5.4	4.8	7.2
s.d. =	2.9	2.2	2.5	1.6
med =	3	5	5	7
FEMALE				
mean =	5.6	6.9	5.6	8.9
s.d. =	3.4	2.2	2.6	2.1
med =	5	7	5	9

TABLE 6.12

STAI-TRAIT Anxiety: Mean Scores/Standard Deviations/Median Scores Per Condition Per Gender
(n = 123 couples)

CONDITION		MEN	WOMEN
CONTROL (n = 31couples)			
	md=	37.1	34.6
	s.d.=	9.3	6.5
	med=	33	33
WORKBOOK ONLY (n = 28 couples)			
	md=	33.2	39.2
	s.d.=	4.7	10.0
	med=	31	37
LECTURE (n = 33 couples)			
	md=	35.2	39.2
	s.d.=	6.7	10.8
	med=	34	37
DISCUSSION (n=31 couples)			
	m=	34.8	34.1
	s.d.=	6.5	7.9
	med=	34.5	31

TABLE 6.13

STAI-State Anxiety: Mean Scores/Standard Deviation/Median Scores Per Condition Per Gender
(n = 123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	30.4	30.9	29.4	29.4	29.5	28.9
	s.d.=	8.2	8.9	9.7	10.8	10.5	9.8
	med=	29	30	26.5	26	29	25
MEN	m=	32.5	35.0	34.5	32.4	33.2	33.8
	s.d.=	10.7	11.9	12.2	11.2	12.9	14.1
	med=	31	32	33	30	28.5	31
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	34.4	31.9	31.9	31.5	34.1	30.9
	s.d.=	12.9	11.1	11.3	9.3	12.7	10.5
	med=	31	29	27.5	30	31	29
MEN	m=	29.6	32.9	31.9	31.4	31.5	31.2
	s.d.=	7.3	9.3	9.6	11.1	9.7	8.8
	med=	29	32	30	28	30	30

TABLE 6.13 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	35.6	32.9	31.4	32.3	34.5	32.4
	s.d.=	13.3	10.3	10.1	12.3	13.0	13.1
	med=	31	33	28	27	32	33
MEN	m=	31.8	30.3	31.7	29.6	29.3	32.4
	s.d.=	7.9	6.7	8.4	7.7	8.1	10.6
	med=	31	29	30.5	28	29	30
DISCUSSION (n=31 couples)							
WOMEN	m=	29.8	33.9	28.9	27.2	27.7	28.7
	s.d.=	10.0	12.9	11.8	11.6	11.5	11.4
	med=	28	33	23	22	21.5	26
MEN	m=	29.4	29.5	30.6	30.3	30.3	30.9
	s.d.=	8.8	7.4	8.5	9.9	10.0	9.1
	med=	26.5	29	30	28.5	28	30

Condition, there appeared to be a slight trend, with anxiety increasing from Baseline to Month One, then steadily decreasing from Month One to Month Three and slightly increasing from Month Three to Month Six.

In analysis at Baseline, there were no significant main effects of gender (d.f.=1, 237; F=1.7; p=.2) or Condition (d.f.=3, 237; F=1.6; p=.2), nor was there a significant gender by Condition interaction effect (d.f.=3, 237; F=1.5; p=.23).

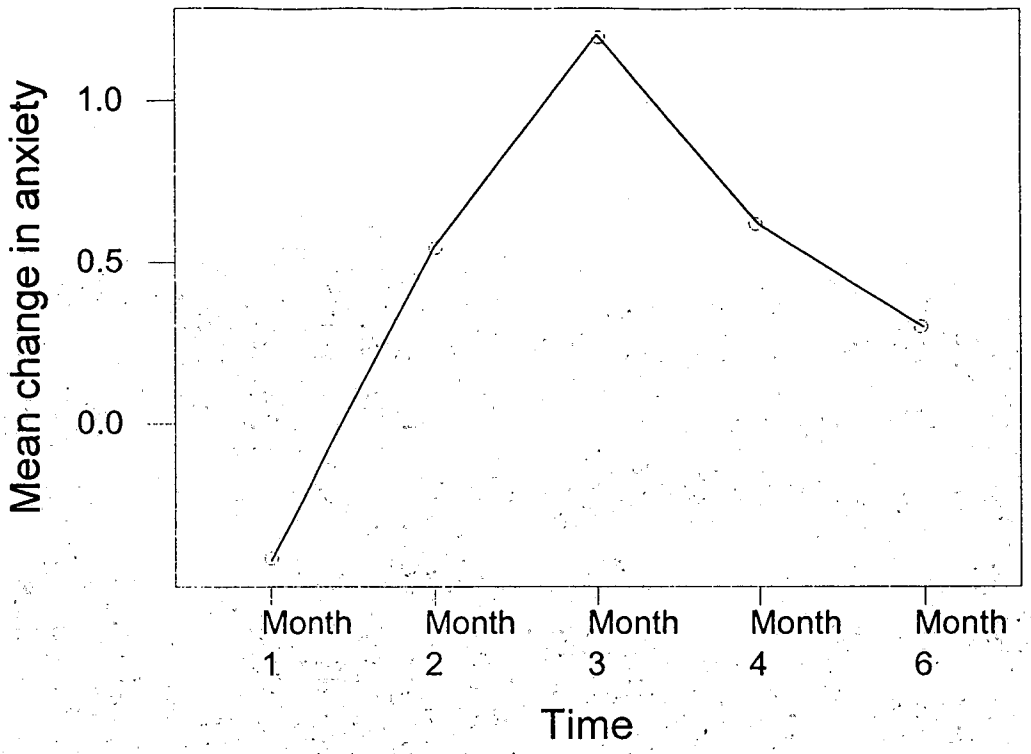
In investigating differences between genders and among Conditions across measurement points, there were no significant main effects of Condition (d.f.=3, 244; F=.85; p=.46), or gender (d.f.=1, 244; F=.81; p=.42), nor was there a significant Condition by gender interaction (d.f.=3, 244; F= .59; p= .62). Further, although there was a significant main effect of time (d.f.=3.75, 896; F=2.44; p=.05), there were no significant interaction effects of Condition by time (d.f.=11.3, 896; F=.97; p=.47), gender by time (d.f.=3.75; F=1.74; p=.15), or Condition by gender by time (d.f.=11.2, 896; F=1.6; p=0.1).

Figure 6.1 presents mean change scores obtained on the STAI (State Anxiety) by the entire sample (n=246 participants) across measurement points. In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq 1.4$. On this basis, the only significant difference observed among change scores was in the decrease in anxiety observed between Month One and Month Three.

Figure 6.2 presents mean scores obtained on the STAI (State Anxiety) by the entire sample (n=246 participants) across measurement points. For the STAI (State), an increase in mean raw scores indicated increased state anxiety. As observed in Figure 6.2, state anxiety increased between Baseline and Month One and decreased between Month One and Month Three, reaching the lowest level at Month Three. Between Month Three and Month Six, state anxiety gradually increased but continued to remain lower than Baseline.

FIGURE 6.1

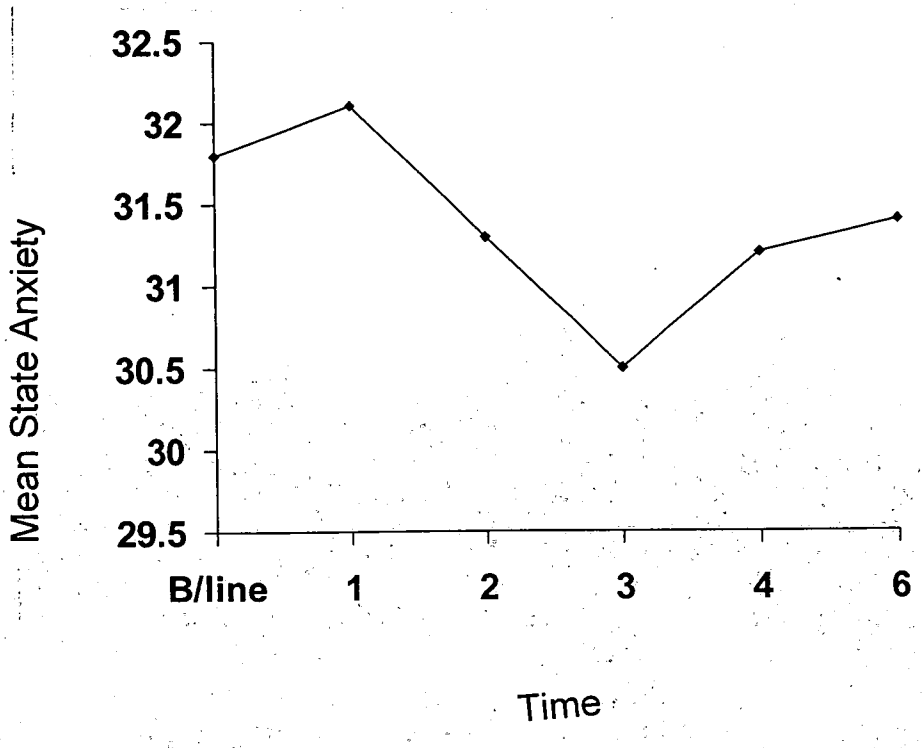
STAI (State Anxiety): Mean Change Scores (Month One-Six)
(n=246 participants)



Mean Change Scores: Month 1-Mean= -0.42, sd=9.1;
Month 2-Mean=0.55, sd=9.1; Month 3-Mean=1.2, sd=9.9;
Month 4-Mean=0.62, sd=10.1; Month 6-Mean=0.3, sd=9.9.

FIGURE 6.2

STAI (State Anxiety): Mean Scores (Baseline-Month Six)
(n=246 participants)



(Key: 1=Month One; 2=Month Two; 3=Month Three; 4= Month Four; 6=Month Six)
Mean Scores: Baseline- Mean=31.8, s.d.=10.3; Month 1-Mean= 32.1, s.d.=10.0; Month 2-Mean=31.2, s.d.=10.3; Month 3-Mean=30.5, s.d.=10.5; Month 4-Mean=31.2, s.d.=11.2; Month 6-Mean=31.4, s.d.=11.2.

HAD Scale

Anxiety

Table 6.14 presents mean raw scores, standard deviations and median scores obtained per men and women in each Condition on the HAD Scale (Anxiety sub-scale). Examination of this data revealed a similar pattern to that observed on the STAI (State Anxiety) data: scores obtained by men and women in each Condition appeared roughly comparable across measurement points; for both genders and in each Condition, there appeared to be a slight trend, with scores increasing from Baseline to Month One, steadily decreasing from Month One to Month Four and slightly increasing from Month Four to Month Six.

Analysis of the data at Baseline demonstrated a significant main effect of gender (d.f.=1, 238; F=8.6; p=.004). Women (m=6.2; s.d.=3.6) demonstrated significantly higher mean anxiety scores at Baseline than men (m=5; s.d.=2.9). However, there was no significant main effect of Condition (d.f.=3, 238; F=2.5; p=.06), nor was there a significant gender by Condition interaction (d.f.=3, 238; F=2.6; p=.07).

In investigating differences between genders and among Conditions across measurement points, there were no significant main effects of Condition (d.f.=3,227; F=.51; p= .68), or gender (d.f.=1, 227; F=.96; p=.73), nor was there a significant Condition by gender interaction (d.f.=3, 227; F=.91; p=.44). Further, although there was a significant main effect of time (d.f.=3.4, 908; F=18.71; p=.001), there were no significant interaction effects of Condition by time (d.f.=10.32, 908; F=1.25; p=.25), gender by time (d.f.=3.44, 908; F=2.10; p=0.1), or Condition by gender by time (d.f.=10.32, 908; F=1.37; p=.2).

Figure 6.3 presents mean change scores obtained on the HAD Scale (Anxiety sub-scale) by the entire sample (n=246 participants) across measurement points.

TABLE 6.14

HAD Scale (Anxiety sub-scale): Mean Scores/Standard Deviations/Median Scores
Per Condition Per Gender
(n = 123 couples)

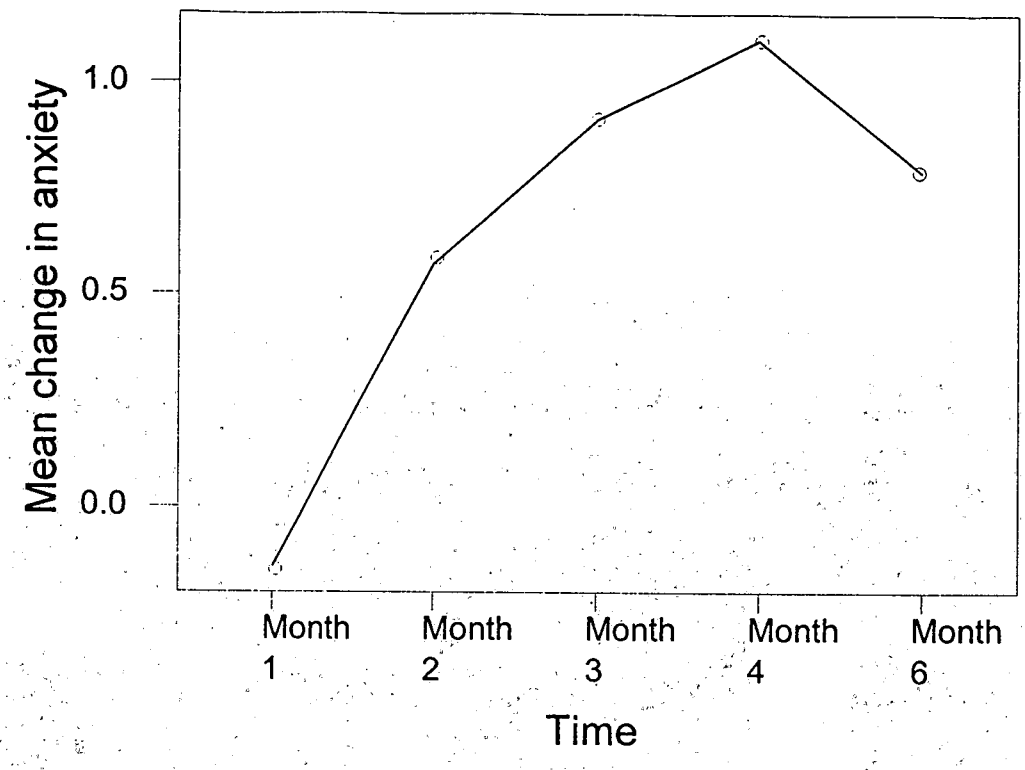
CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	5.2	6.1	4.8	4.3	3.8	4.0
	s.d.=	2.6	3.1	3.3	3.5	3.9	3.9
	med=	5	5	4	3	2	3
MEN	m=	5.4	6.2	5.6	4.9	4.8	5.2
	s.d.=	3.7	3.4	3.6	3.2	3.5	3.6
	med=	5	6	5	5	4	5
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	7.6	7.1	5.7	5.6	5.5	5.6
	s.d.=	3.7	3.6	3.8	3.7	3.8	4.0
	med=	7	6	6	5	4.5	5
MEN	m=	4.9	5.0	5.2	4.5	4.8	5.1
	s.d.=	2.7	3.0	2.9	3.2	3.3	3.2
	med=	5	6	6	4	4.5	5

TABLE 6.14 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	6.9	6.5	5.9	5.7	5.6	6.4
	s.d.=	3.9	3.6	3.8	4.2	4.5	4.1
	med=	6	6	5	6	5	6
MEN	m=	5.2	5.2	4.7	4.1	3.7	4.6
	s.d.=	2.2	2.8	3.1	3.2	3.1	3.2
	med=	5	5	4	4	3	4
DISCUSSION (N=31 couples)							
WOMEN	m=	5.0	5.6	4.3	3.5	3.8	3.6
	s.d.=	3.3	3.9	3.6	4.1	4.0	3.9
	med=	5	5	3.5	2	2.5	2.5
MEN	m=	4.6	4.2	4.3	4.5	4.4	3.8
	s.d.=	2.8	2.6	3.4	3.3	3.2	3.4
	med=	4	4	4	4	4	3.5

FIGURE 6.3

HAD Scale (Anxiety Sub-Scale): Mean Change Scores (Month One-Six)
(n=246 participants)



Mean Change Scores: Month 1-Mean= -0.14, sd=3.1;
Month 2-Mean=0.57, sd=3.1; Month 3-Mean=0.91, sd=3.1;
Month 4-Mean=1.1, sd=3.2; Month 6-Mean=0.79, sd=3.2.

In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq .39$. By this criterion, anxiety levels were significantly lower, when compared to Month One, at each subsequent measurement interval. Additionally, the anxiety level observed at Month Four was also significantly lower than that observed at Month Two. This clearly reflects the significant main effect of time observed in the Repeated ANOVA.

Figure 6.4 presents mean scores obtained on the HAD Scale (Anxiety sub-scale) for the entire sample (n=246 participants). For the HAD (Anxiety sub-scale), an increase in mean scores indicated increased anxious symptomatology. As noted in Figure 6.4, anxiety increased marginally between Baseline and Month One, steadily decreased between Month One and Month Four, and, while remaining lower than Baseline, increased marginally between Month Four and Month Six.

Caseness

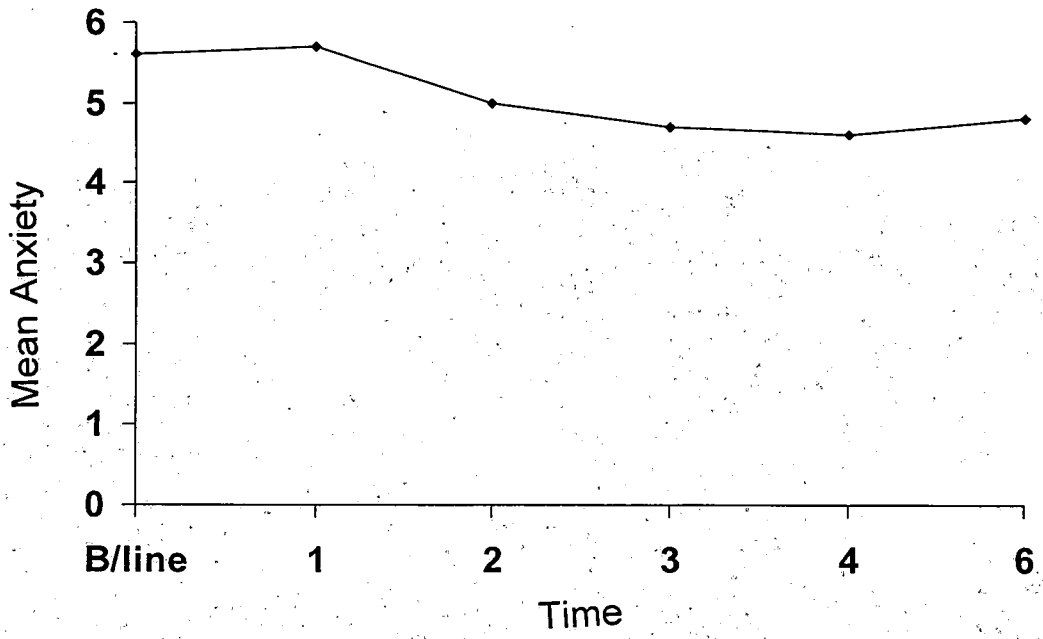
For the HAD Scale (Anxiety sub-scale), caseness was defined by raw scores of 11 or greater. Caseness will be considered for women and men separately.

Women

Table 6.15 presents raw scores for individual women in the sample who obtained caseness scores at a minimum of one measurement point. Twenty-five women (20.3% of the sample) obtained caseness scores. Of these, eleven women (8.9% of the entire sample) obtained caseness scores at a minimum of two consecutive measurement points; 5 women (4.0% of the entire sample) obtained caseness scores at every measurement point.

FIGURE 6.4

HAD Scale (Anxiety Sub-Scale): Mean Scores (Baseline-MonthSix)
(n=246 participants)



(Key: 1=Month One; 2=Month Two; 3=Month Three;4=Month Four;6=Month Six)
Mean Change Scores: Baseline-Mean=5.58,s.d.3.3; Month 1-Mean= 5.72, s.d.=3.3;Month 2-Mean=5.04, s.d.=3.5; Month 3-Mean=4.66, s.d.=3.6; Month 4-Mean=4.56, s.d.=3.7; Month 6-Mean=4.79, s.d.=3.7.

In considering the distribution of women obtaining caseness scores by Condition, 4 women in the Control Condition (13%), 7 women in the Workbook-Only Condition (25%), 8 women in the Lecture Condition (24%) and 6 women in the Discussion Condition (19%) obtained caseness scores at least one measurement point. Of the women obtaining caseness scores at every measurement point, 1 woman came from each of the Control, Discussion and Lecture Conditions and 2 women came from the Workbook-Only Condition.

TABLE 6.15

HAD Scale (Anxiety sub-scale): Raw Scores for Women Obtaining Caseness Scores (11 or greater)
(n=25 women)

	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
C2		11	12			
C12		13				
C19	12	15	15	16	19	18
C30				11		11
D6		11				
D11		17		11		
D15			11			
D31	14	11	14	18	16	19
D51			12			
D87	12				13	
W3		18		14	11	14
W41						11
W43	11					
W45	14	15	16	15	14	13
W55	15	13	13	11	12	11
W57	12					
W91	15				14	13
L1		13	11	11	12	11
L24	19	12	16	14	20	15
L29	16	13	14	17	12	
L49	12					
L59		14				
L65			11		13	
L71	12	12	11	11		11
L95						13

Key:
C=Control; D=Discussion; W=Workbook; L=Lecture.

Men

Table 6.16 presents raw scores for individual men in the sample who obtained caseness scores at a minimum of one measurement point. Twenty men (16% of the sample) obtained caseness scores. Of these, 8 men (6.5% of the entire sample) obtained caseness scores at a minimum of two consecutive measurement points. Although none of the men obtained caseness scores at every measurement point, 2 of the men obtained caseness at four consecutive measurement points (one man in each of the Workbook-Only and Discussion Conditions) and 1 man obtained caseness at three measurement points (Control Condition).

In considering the distribution of men obtaining caseness scores by Condition, 9 men in the Control Condition (29%), 2 men in the Workbook-Only Condition (7%), 4 men in the Lecture Condition (12%) and 5 men in the Discussion Condition (16%) obtained caseness scores at a minimum of one measurement point.

In two couples (1.6% of the sample; 1 from the Workbook-Only Condition and 1 from the Lecture Condition), both partners obtained caseness scores at the same two consecutive measurement points.

Depression

Table 6.17 presents mean raw scores, standard deviations and median scores obtained per men in each Condition on the HAD Scale (Depression sub-scale). Examination of the data appeared to suggest that scores obtained by men in each Condition were roughly comparable. There appeared to be an increase in the mean raw scores obtained by men in each Condition from Baseline to Month One, a steady decrease in scores between Month One and Month Four and a slight increase in scores between Month Four and Month Six. Interestingly, in each Condition, mean raw scores obtained at Month Six exceeded those obtained at Baseline.

TABLE 6.16

HAD Scale (Anxiety sub-scale): Raw Scores for Men Obtaining Caseness Scores (11 or greater)
(n=20 men)

	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
C1		11		12	11	13
C11	16					13
C22	11					
C24			14			
C27		13				
C29		11				
C34					12	11
C37		11	14			
C42	12	13				
D14		11	14	12	14	11
D28			15	14		
D44				11		
D48						12
D84					11	
W46			11	13	12	11
W60		14	11			
L2		13	12			
L23						12
L44				12	11	
L98				11		14

Key:
C=Control; D=Discussion; W=Workbook; L=Lecture.

TABLE 6.17

HAD Scale (Depression sub-scale): Mean Scores/Standard Deviation/Median Scores Per Condition; Men Only
(n=123 participants)

CONDITION	BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31)						3.5
m=	2.6	3.7	3.4	3.5	3.3	3.9
s.d.=	2.7	2.8	3.3	3.4	3.8	2
med=	2	3	2	2	2	
WORKBOOK ONLY (n=28 couples)						
md=	1.4	2.7	3.0	2.6	2.8	2.8
s.d.=	1.4	3.2	2.9	2.8	3.2	2.5
med=	1	2	2	2	2	2
LECTURE (n=33)						
m=	2.2	3.4	3.3	2.6	2.3	3.1
s.d.=	1.7	3.0	3.1	2.2	2.1	2.5
med=	2	3	2	3	2	3
DISCUSSION (n=31)						
m=	2.2	3.1	2.9	2.4	2.9	2.8
s.d.=	2.0	2.9	2.5	2.0	2.2	2.5
med=	2	2	3	3.0	3	2

In analysis at Baseline, there was no significant main effect of Condition (d.f.=3, 119; F=1.7; p=.18). In investigating differences among Conditions across measurement points, there was no significant main effect of Condition (d.f.= 3,144; F=.36; p=.78). Further, although there was a significant main effect of time (d.f.=3.75, 456; F=7.56; p=.001), there was no significant interaction effect of Condition by time (d.f.=11.24, 456; F=.75; p=.70).

Figure 6.5 presents mean change scores obtained on HAD Scale (Depression sub-scale) by the men (n=123 participants) across measurement points. In Post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq .45$. By this criterion, depression levels were significantly lower, when compared to Month One, at Months Three and Four only.

Figure 6.6 presents mean scores obtained on HAD Scale (Depression sub-scale) by the men (n=123 participants) across measurement points For the HAD (Depression sub-scale), an increase in mean scores indicated an increase in depressive symptomatology. Interestingly, as noted in Figure 6.5, mean scores obtained at each measurement interval were higher than at Baseline, indicating that depressive symptomatology had increased (when compared to Baseline) at each measurement interval. The largest variations from Baseline were observed at Month One and Month Six.

Caseness

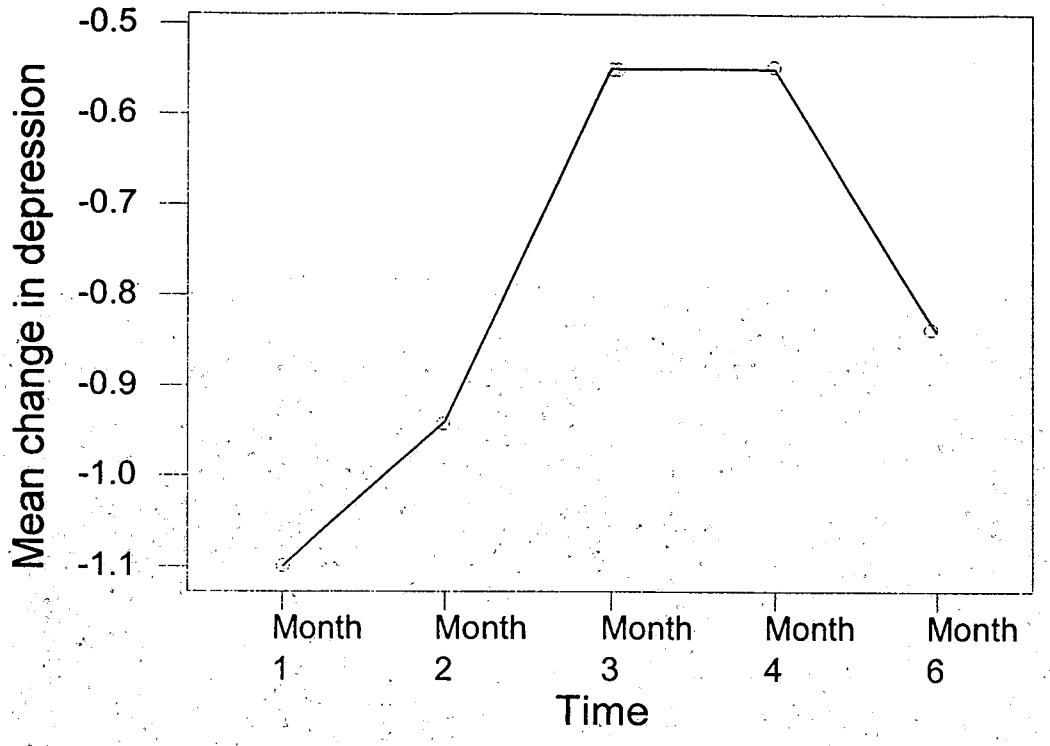
For the HAD Scale (Depression sub-scale), caseness was defined by raw scores of 11 or greater.

Table 6.18 presents raw scores for individual men in the sample who obtained caseness scores at a minimum of one measurement point. Six men (5% of the sample) obtained caseness scores. Of these, 5 men (4% of the entire sample) obtained caseness scores at a minimum of two consecutive measurement

points. In considering the distribution of men obtaining caseness scores across Conditions, 3 men in the Control Condition (9.7%), 1 man in the Workbook-Only Condition (3.6%), 1 man in the Lecture Condition (3.0%) and 1 man in the Discussion Condition (3.2%) obtained caseness scores at least one measurement point. Two men (1 in the Control Condition and 1 in the Workbook-Only Condition) obtained caseness scores on both the HAD Scale (Anxiety and Depression) sub-scales at a minimum of at least two consecutive measurement points.

FIGURE 6.5

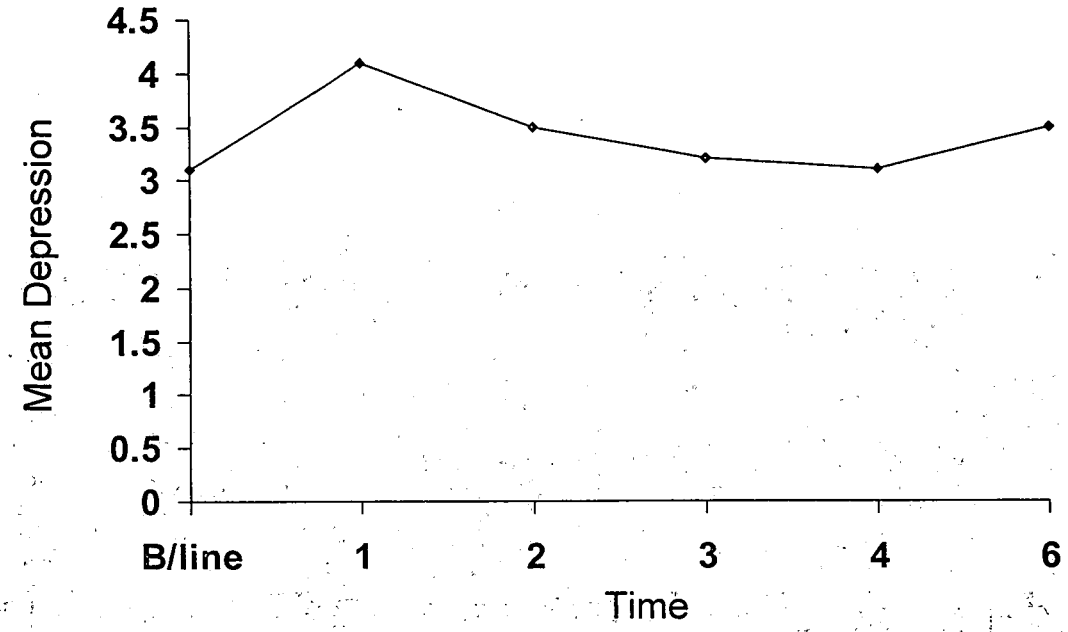
HAD Scale (Depression Sub-Scale): Mean Change Scores (Month One-Six)
(n=123 male participants)



Mean Change Scores: Month 1-Mean= -1.1, sd=2.9;
Month 2-Mean=0.94, sd=2.7; Month 3-Mean= -0.55, sd=2.4;
Month 4-Mean= -0.55, sd=2.5; Month 6-Mean= -0.84, sd=2.4.

FIGURE 6.6

HAD Scale (Depression Sub-Scale): Mean Scores (Baseline-Month Six)
(n=123 male participants)



(Key: 1=Month One; 2=Month Two; 3=Month Three; 4= Month Four; 6=Month Six)
Mean Change Scores: Baseline – Mean=3.12, s.d.=2.7; Month 1-Mean= 4.13, s.d.=3.3; Month 2-Mean=3.52, s.d.=3.3; Month 3-Mean= 3.22, s.d.=3.0;
Month 4-Mean= 3.18, s.d.=3.3; Month 6-Mean=3.48, s.d.=3.4.

TABLE 6.18

HAD-Depression Sub-Scale: Raw Scores for Men
Obtaining Caseness Scores (11 or greater)
(n=6 men)

	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
C18			13	11		
C24			11		11	
C34				13	15	18
D52		14	11			
W60		17	13			
L72		13	13			

Key:
C=Control; D=Discussion; W=Workbook; L=Lecture.

EPDS

Table 6.19 presents mean raw scores, standard deviations and median scores obtained by women in each Condition on the EPDS. Examination of the data appeared to suggest that scores obtained by women in each Condition were roughly comparable at each measurement interval. In considering the scores across the entire sample, there appeared to be a general trend indicating a reduction in mean scores and median scores from Month One to Month Six, indicating an improvement in emotional well-being across the measurement intervals.

Statistical analysis on scores obtained on the EPDS was conducted on raw scores (as the measure was, obviously, not completed at Baseline). In

TABLE 6.19

EPDS: Mean Scores/Standard Deviations/Median Scores Per Condition
(n = 123 participants)

CONDITION	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31)					
m=	6.4	5.3	4.9	4.7	4.2
s.d.=	3.5	4.6	5.3	4.6	4.0
med=	5	4	3	3	3
WORKBOOK ONLY (n=28)					
m=	7.9	6.4	6.3	6.4	5.8
s.d.=	3.9	4.6	4.9	6.0	4.8
med=	7	5	6.0	4	5
LECTURE (n=33)					
m=	7.1	6.0	5.4	5.8	6.6
s.d.=	4.4	5.2	5.0	5.7	6.5
med=	7	6	4	4	5
DISCUSSION (n=31)					
m=	7.4	5.4	4.4	4.4	4.2
s.d.=	6.2	5.7	5.3	5.2	4.7
med=	5.5	3	2	2	2.5

analysis, there was no significant main effect of Condition (d.f.=3, 111; F=.77; p=.51). However, although there was a significant main effect of time (d.f.=3.4, 444; F=9.9; p=.001), confirming the observed improvements in emotional well-being over time, there was no significant interaction effect of Condition by time (d.f.=10.17, 444; F=.80; p=.76).

Figure 6.7 presents mean raw scores obtained on the EPDS by women (n=123 participants) across measurement points.

In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean raw scores was $cd \geq 1.05$. By this criterion, levels of emotional dysphoria were significantly lower, when compared to Month One, at each subsequent measurement interval. This pattern of decreasing dysphoria is clearly demonstrated in Figure 6.7.

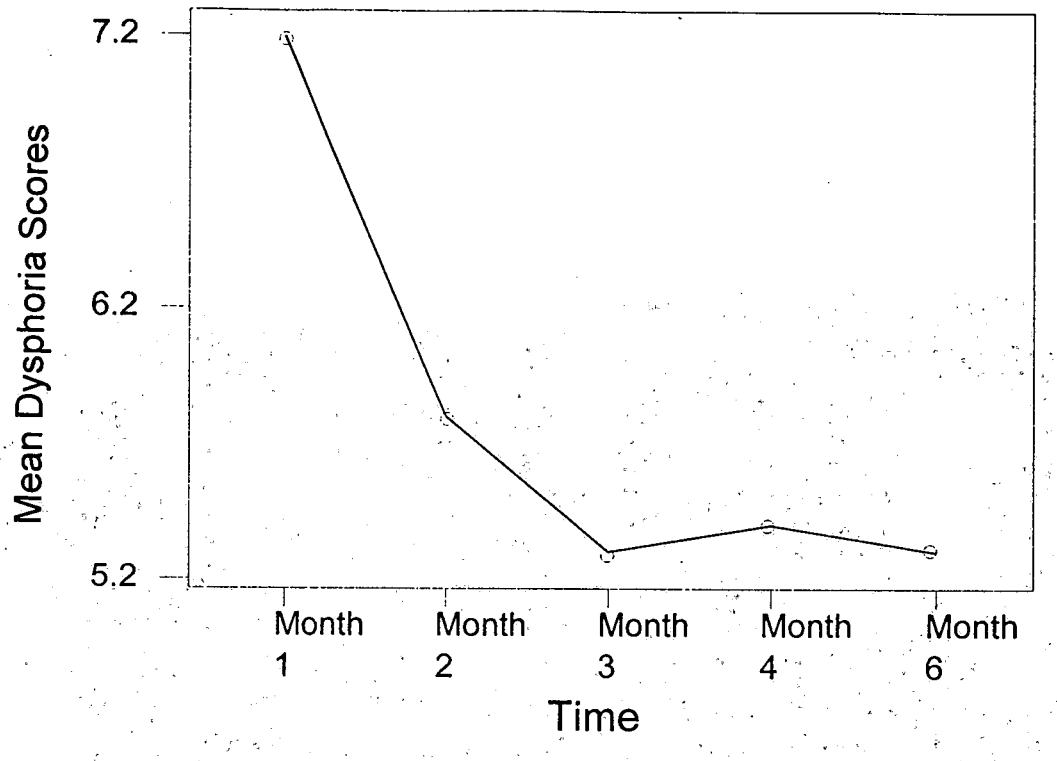
Caseness

For the EPDS, caseness was defined by raw scores of 12 or greater.

Table 6.20 presents raw scores for individual women in the sample who obtained caseness scores at a minimum of one measurement point. Thirty-six women (29% of the sample) obtained caseness scores. Of these, 19 women (15.4% of the sample) obtained caseness scores at a minimum of two consecutive measurement points. Four women (3.3% of the sample) obtained caseness scores at every measurement point: 2 women in the Workbook-Only Condition; and one woman in both the Lecture Condition and the Discussion Condition. A further three women (2.4% of the sample) obtained caseness scores at four consecutive measurement points. Of these women (one from each of the Workbook-Only, Lecture and Discussion Conditions), two women obtained caseness scores at the first four measurement points and obtained non-caseness scores at follow-up and the third woman obtained caseness scores at the final four measurement points (and obtained a non-caseness score at Month One).

FIGURE 6.7

EPDS: Mean Scores (Month One-Six)
(n=123 female participants)



Mean Scores: Month 1-Mean=7.2, sd=4.6;
Month 2-Mean=5.8, sd=5.0; Month 3-Mean=5.3, sd=5.1;
Month 4-Mean=5.4, sd=5.4; Month 6-Mean=5.3, sd=5.2.

TABLE 6.20

EPDS: Raw Scores for Women Obtaining Caseness Scores (12 or greater) (n=36 women)

	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
C2	12	15			
C15				12	
C19	13		20	15	14
C23	12	13	15		
C28		13			
C30	13	13			
C33			16	16	
C39		13			
C67					12
D4	14				
D6	14				
D10		14			
D11	19				
D15	13	12			
D31	14	19	22	15	20
D47	15			13	
D51	23	20			
D71	18				
D87		16	16	20	13
W3	14	12	15	13	12
W7	13	12	12		12
W16	12				
W41			13		
W45	18	13	15	19	13
W55		14			13
W57	12	12	12		
W91		16	17	27	20
L1	12	13	13	14	
L24		22	16	22	27
L41	15		13		
L49	12				
L65				12	
L71	22	17	15	13	19
L75	12				
L95		14	15	19	24
L103			15	14	

Key:

C=Control; D=Discussion; W=Workbook; L=Lecture.

At Month One, 22 women (17.9% of the entire sample) demonstrated caseness scores: 4 women in the Control Condition, 8 women in the Discussion Condition and 5 women in both the Workbook-Only and Lecture Conditions. At Month Six, 12 women (9.7% of the entiresample) demonstrated caseness scores. (Six women [4.9% of the entire sample] demonstrated caseness scores at both measurement points.) Interestingly, only one woman in each of the Control. Discussion and Lecture Conditions demonstrated caseness at both Month One and Month Six. In the Workbook-Only Condition, three women demonstrated caseness at both these measurement intervals. None of the differences in proportion of caseness across Conditions and within each measurement interval was significant.

In considering the distribution of women obtaining caseness scores across Conditions, 9 women in the Control Condition (29%), 8 women in the Workbook-Only Condition (28.6%), 9 women in the Lecture Condition (27.3%) and 10 women in the Discussion Condition (32.3%) obtained caseness scores at a minimum of at least one measurement point.

Nine women (7.3% of the entire sample) obtained caseness scores at a minimum of the same two consecutive measurement points on both the EPDS and the HAD Scale (Anxiety sub-scale). Of the 4 women obtaining EPDS caseness scores at every measurement point (Month One to Month Six), three of these women also obtained HAD Scale (Anxiety sub-scale) caseness scores at the same measurement points. In two couples (1.6% of the entire sample of couples; 1 couple from both the Control and Discussion Conditions), the male partner obtained HAD Scale (Depression sub-scale) caseness scores at the same two consecutive measurement points as the female partner obtained EPDS caseness scores.

iii) Summary

Statistical analysis conducted among scores obtained on measures drawn from the Psychological Well-Being domain of the transition to parenthood revealed a

number of significant findings. However, there were no significant differences observed among Conditions on any measure.

On the CCEI, scores obtained by women on four of the six sub-scales (Anxiety, Depression, Obsessionality and Somatic Concomitants of Anxiety) significantly exceeded scores obtained by men, suggesting an increased level of symptomatology among women at Baseline on these measures.

On the STAI (State Anxiety), scores obtained among the entire sample (n=246 participants) significantly altered over time. Following an increase in state anxiety between Baseline and Month One, there was a decrease in state anxiety (when compared to Baseline) thereafter, with the lowest level of state anxiety observed at Month Three.

On the HAD Scale (Anxiety sub-scale), scores obtained by the women in the sample significantly exceeded those obtained by men at Baseline. Further, although there was neither a significant main effect of Condition nor significant gender by Condition interaction, these analyses both approached significance. Couples in the Workbook-Only Condition obtained the highest mean scores at Baseline while couples in the Discussion Condition obtained the lowest mean scores. Similarly, women in the Workbook-Only Condition obtained higher mean scores than women in the other Conditions, while women in the Discussion Condition obtained the lowest mean scores.

Again, on the HAD Scale (Anxiety sub-scale) mean change scores observed among the entire sample (n=246 participants) significantly altered over time. The pattern of this significant variation indicated that levels of anxious symptomatology became progressively lower across measurement intervals. The greatest reduction, relative to Baseline, (and, therefore, the lowest mean raw score) was observed at Month Four.

Although for the HAD Scale (Depression sub-scale), levels of depressive symptomatology for the entire sample of men were, overall, higher at each subsequent measurement interval than at Baseline, these levels decreased

over time. The lowest levels were observed at Months Three and Four. For the EPDS, there was a significant decrease in dyspohoria observed from Month One to Month Six across the entire sample of women.

There is a difficulty with statistical analysis of such categorical data in this study, in that the small numbers within some cells hamper conclusions which might be of clinical utitlity. However, in a health promotion-based study, like the present study, power calculations and subsequent decisions regarding sample size were not based on the detection of caseness vs. non-caseness. A study in which caseness prevalence was of central interest (Reid et al, unpublished manuscript) would require a much larger sample than the one employed here.

In Table 6.21, frequencies of caseness scores among the sample for the HAD Scale (Anxiety and Depression sub-scales) and EPDS are presented by Condition and gender. As noted in Table Forty Three, for the HAD (Anxiety sub-scale) women experienced greater frequencies of caseness than men in each Condition except for the Control Condition. Further, more women obtained caseness scores for the EPDS than for the HAD (Anxiety sub-scale) in each Condition (with nine women obtaining caseness scores on both measures).

b) RELATIONSHIP WELL-BEING MEASURES

i) Plan of Analysis

Measures within this domain included: the Communication Scale (CS), the Dyadic Adjustment Scale (DAS) and the Marital Role Inventory (MRI). For each measure (including each sub-scale of the DAS: Affection, Cohesion, Consensus, Satisfaction and Total), in order to investigate differences among Conditions and between genders in scores obtained at Baseline, 4 (Condition) by 2 (gender) ANOVA's were performed. In subsequent analysis, Repeated Measures ANOVA's (per change scores) were conducted to investigate

differences in scores obtained among Conditions and between genders across measurement intervals.

In each analysis where Repeated Measures ANOVA's were employed, the sphericity assumption had been violated (see: Appendix Two). Correction factors were applied to these analyses, therefore, as per Huynh and Feldt (1976). Further, where significant results were obtained per Repeated Measures ANOVA analysis for main effects, the Studentised Range Statistic was employed as a post-hoc test (DAS [Affection, Consensus, Satisfaction sub-scales], MRI).

TABLE 6.21

Frequencies/Percentages Of Caseness Scores by Gender/Condition
for the HAD Scale (Anxiety/Depression) and the EPDS – Month One to Month Six
(n=123 couples)

CONDITION	SCALE			
	HAD (ANXIETY)		HAD (DEPRESSION)	EPDS
	WOMEN	MEN	MEN	WOMEN
CONTROL n=31 couples	4 (13%)	9 (29%)	3 (9.7%)	9 (29%)
W/BOOK n=28 couples	7 (25%)	2 (7%)	1 (3.6%)	8 (28.6%)
LECTURE n=33 couples	8 (24%)	4 (12%)	1 (3.0%)	9 (27.3%)
DISCUSSION n=31 couples	6 (19%)	5 (16%)	1 (3.2%)	10 (32.3%)
TOTAL n=123 couples	25 (20.3%)	20 (16%)	6 (4.9%)	36 (29.3%)

ii) Analysis

CS:

Table 6.22 presents mean raw scores, standard deviations and median scores obtained by men and women in each Condition on the CS at each measurement interval. There appeared to be little variation in mean or median scores obtained per Condition or gender.

For the CS, higher raw scores indicated greater perceived communication (with a possible range of scores from 0 – 50). As noted in Table 6.22, mean scores across Conditions and across measurement intervals ranged from 20 (Discussion Condition females at Month Two) to 23.1 (Workbook-Only females at Month Two); median scores ranged from 18 (Discussion Condition females at Month Two) to 25 (Lecture Condition males at Month One). Although mean and median scores obtained by the entire sample were at or below the mid-point of the possible range of scores on this measure which might suggest average to below-average communication across Conditions and genders, a global rating of communication (functional communication versus dysfunctional communication) cannot, in the absence of a caseness "cut-off", be ascribed to these scores.

In analysis at Baseline, there were no significant main effects of gender (d.f.=1, 237; F=.43; p=.51) or Condition (d.f.=3, 237; F=.89; p=.45), nor was there a significant gender by Condition interaction effect (d.f.=3, 237; F=.16; p=.93).

In investigating differences between genders and among Conditions across measurement intervals, there were no significant main effects of Condition (d.f.=3,225; F=1.31; p=.27), or gender (d.f.=1, 225; F=1.39; p=.24), nor was there a significant Condition by gender interaction (d.f.= 3, 225; F=.63; p=.60). Further, there was no significant main effect of time (d.f.=3.83, 900; F=1.36; p=.25), nor were there significant interaction effects of Condition by time (d.f.=11.5, 900; F=.72; p=.73), gender by time (d.f.=3.83, 900; F=.31; p=.86) or Condition by gender by time (d.f.=11.5, 900; F=1.1; p=.38).

DAS

Tables 6.23 to 6.27 present mean raw scores, standard deviations and median scores obtained by men and women in each Condition on each sub-scale of the DAS (Affection, Cohesion, Consensus, Satisfaction and Total) at each measurement interval.

There appeared to be little variation in mean or median scores obtained per Condition or gender for Tables 6.24 (Cohesion), 6.26 (Satisfaction) or 6.27 (Total). However, on Table 6.23 (Satisfaction), there appeared to be a decrease in scores obtained by women and men in each Condition across measurement intervals. In Table 6.25 (Consensus), there appeared to a reversal of this pattern, with an increase in scores obtained by both genders in each Condition over time.

TABLE 6.22

Communication Scale: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	20 1	20.1	21.1	22.4	20.7	21.9
	s.d.=	7.9	7.0	8.2	7.5	9.1	9.5
	med=	19	19	19	22	19	21
MEN	m=	21.6	24.0	22.3	24.0	23.1	22.7
	s.d.=	8.2	8.3	8.2	9.0	9.3	7.8
	med=	21	23	19.5	23.5	23	21
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	20.7	22.9	23.1	23.1	22.7	21.5
	s.d.=	7.9	6.5	7.8	8.2	8.6	9.2
	med=	19	23	21.5	24	22	19
MEN	m=	20.8	21.5	21.5	21.2	21.7	21.7
	s.d.=	6.9	6.0	7.0	6.0	7.3	6.2
	med=	19	23	20	20.5	21.5	22

TABLE 6.22 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE N=33 couples)							
WOMEN	m=	22.8	23.2	21.9	22.2	22.7	23.0
	s.d.=	8.0	8.2	7.9	6.5	8.0	8.8
	med=	22.5	24	23	24	23	24
MEN	m=	22.6	23.0	23.1	22.5	22.0	23.5
	s.d.=	6.1	7.1	7.0	8.2	8.6	9.4
	med=	22	25	23	22	21	23
DISCUSSION (n=31couples)							
WOMEN	m=	21.1	21.8	20.0	20.8	21.3	22.3
	s.d.=	7.5	8.2	8.0	7.8	8.0	8.3
	med=	21	21	18	19.5	19	23
MEN	m=	21.8	21.3	21.2	21.6	21.6	21.0
	s.d.=	7.3	6.7	6.4	8.4	8.6	7.8
	med=	20.5	21	21	20.5	21	21

TABLE 6.23

DAS-Affection: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	9.5	9.7	9.1	9.4	9.4	8.6
	s.d.=	2.0	2.3	2.4	2.4	2.3	2.6
	med=	10	10	9.5	10	10	10
MEN	m=	8.9	9.0	9.0	8.7	9.3	8.7
	s.d.=	2.4	2.7	2.5	2.6	2.5	2.6
	med=	10	10	9.5	9	10	9.5
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	9.4	9.2	9.4	9.7	9.5	9.0
	s.d.=	1.7	1.9	1.7	1.6	1.7	1.9
	med=	10	10	10	10	10	10
MEN	m=	9.6	9.5	9.4	9.5	9.3	8.8
	s.d.=	1.5	1.2	1.5	1.4	1.8	2.0
	med=	10	9	10	10	10	9

TABLE 6.23 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33couples)							
WOMEN	m=	9.3	9.5	9.5	9.3	9.4	9.1
	s.d.=	1.6	1.5	1.7	1.9	2.0	1.8
	med=	9	10	10	10	10	9
MEN	m=	9.0	6.2	9.3	9.2	9.6	8.8
	s.d.=	1.8	1.8	1.9	1.9	1.6	2.2
	med=	9	9	10	9	10	9
DISCUSSION (n=31coupes)							
WOMEN	m=	9.8	9.3	9.4	9.4	9.6	9.1
	s.d.=	1.6	2.3	2.4	2.1	2.1	2.2
	med=	10	9	10	10	10	9.5
MEN	m=	9.6	9.2	8.9	9.5	9.2	9.3
	s.d.=	1.5	2.1	2.3	2.3	2.5	2.2
	med=	10	10	9	10	10	9

TABLE 6.24

DAS-Cohesion: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	15.4	15.8	15.9	16.3	15.7	15.5
	s.d.=	3.6	3.9	4.0	3.6	3.8	3.6
	med=	16	17	16	16	16	15
MEN	m=	15.3	15.6	15.9	15.7	15.3	15.6
	s.d.=	3.1	3.6	4.1	3.9	4.0	3.7
	med=	16	16	16	16	15	15.5
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	15.0	15.0	15.0	14.8	15.4	15.3
	s.d.=	3.7	3.6	4.0	3.4	4.0	4.0
	med=	16	15	14	15	16	15
MEN	m=	16.0	16.0	15.8	16.1	16	15.8
	s.d.=	3.1	2.4	3.1	3.2	3.6	3.7
	med=	16	16	15.5	16	16	15

TABLE 6.24 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	15.1	15.4	16.0	16.0	15.8	15.4
	s.d.=	3.4	3.3	3.7	3.9	4.1	4.0
	med=	15	15	16	16	16	16
MEN	m=	16.8	17.0	16.3	16.5	16.4	15.8
	s.d.=	3.3	3.7	3.2	3.3	2.9	3.3
	med=	17	17	16.5	17	16	16
DISCUSSION (n=31couples)							
WOMEN	m=	15.9	14.9	15.0	15.4	15.3	15.3
	s.d.=	3.6	2.9	3.0	3.2	2.8	3.2
	med=	16	14	15	15	15	15
MEN	m=	15.6	15.1	16.0	16.2	16.1	15.9
	s.d.=	3.8	2.9	3.4	3.6	3.6	3.4
	med=	16	15	15	16	16	16.5

TABLE 6.25

DAS-Consensus: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	49.1	51.0	51.5	51.6	52.3	51.0
	s.d.=	7.1	6.6	7.8	7.4	7.2	6.5
	med=	49.5	52	52.5	52	52	51
MEN	m=	48.5	47.9	49.9	49.4	49.6	50.6
	s.d.=	6.2	7.5	8.2	9.9	11.6	6.7
	med=	48	48	49.5	51	49	51
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	48.8	47.8	48.6	49.6	50.4	50.6
	s.d.=	5.8	6.3	6.7	6.7	7.2	5.8
	med=	50	47	48.5	49	50.5	50
MEN	m=	49.6	48.1	50.6	51.3	50.2	51.0
	s.d.=	5.3	5.4	5.2	5.0	4.5	4.7
	med=	50	48	51.5	51	50	51

TABLE 6.25 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	49.0	50.8	51.8	51.9	50.9	50.7
	s.d.=	5.1	5.3	5.6	6.1	5.9	5.4
	med=	49	50	51	52	51	50
MEN	m=	49.5	49.7	50.8	51.4	51.6	49.5
	s.d.=	5.8	6.0	6.7	6.9	7.1	7.3
	med=	49	50	51	51	52	49
DISCUSSION (n=31couples)							
WOMEN	m=	49.8	50.8	50.5	51.4	51.5	51.8
	s.d.=	5.9	6.1	10.3	5.9	6.4	6.0
	med=	48.5	49	52.5	51	50.5	51
MEN	m=	50	50.5	51.7	52.3	52.5	52.2
	s.d.=	6.3	6.6	6.9	6.6	7.0	7.2
	med=	49.5	49.5	51.5	51.5	50	52

TABLE 6.26

DAS-Satisfaction: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n = 123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	41.4	41.1	40.7	40.5	40.5	40.1
	s.d.=	5.3	5.0	5.1	5.4	6.2	6.3
	med=	42.5	42	42.5	41	43	43
MEN	m=	40.6	39.9	39.6	40.2	39.2	40.0
	s.d.=	5.4	7.1	6.0	6.6	8.4	6.0
	med=	42	42	41	42	42.5	42
WORKBOOK ONLY (n=28 couples)							
WOMEN	m=	41.9	41.5	41.3	40.9	40.7	41.0
	s.d.=	3.5	2.8	3.7	4.5	5.2	4.0
	med=	42	42	42	41	41	41.5
MEN	m=	42.3	42.4	41.6	41.9	42.3	41.0
	s.d.=	3.4	2.8	3.2	3.5	3.1	4.0
	med=	43	43	41.5	43	42	42

TABLE 6.26 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	41.8	41.4	41.7	40.9	40.7	40.6
	s.d.=	3.4	4.2	3.8	4.9	4.7	5.0
	med=	42	42	42	41	41	41
MEN	m=	41.8	42.2	41.4	41.5	42.2	40.8
	s.d.=	5.2	4.4	4.9	6.2	5.7	6.1
	med=	43	43	42	44	43	42
DISCUSSION (n=31couples)							
WOMEN	m=	41.9	40.6	41.5	40.9	41.1	40.7
	s.d.=	3.5	6.5	4.0	4.2	3.7	3.7
	med=	41.5	42	41.5	41.5	41	41
MEN	m=	42.5	41.1	41.8	41.6	41.8	41.5
	s.d.=	3.9	4.9	3.9	4.8	4.3	4.7
	med=	43	43	42	42	42	42

TABLE 6.27

DAS-Total: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)							
WOMEN	m=	115.2	117.5	117.2	117.7	117.9	115.2
	s.d.=	14.9	15.4	15.9	16.0	16.7	16.3
	med=	118.5	119	122	122	123	118
MEN	m=	113.3	112.1	114.4	114.0	115.4	115.1
	s.d.=	14.6	18.6	18.2	20.9	21.2	15.4
	med=	114	113	117	119	119	116
WORKBOOK (n=28 couples)							
WOMEN	m=	115.1	113.5	114.5	114.7	115.6	115.5
	s.d.=	11.8	11.2	12.4	14.1	15.1	12.4
	med=	120	115	115	114	119	115
MEN	m=	117.6	116.1	117.4	118.7	118.0	116.5
	s.d.=	9.2	7.9	9.6	9.1	9.6	11.0
	med=	117	116	115	118	119	115

TABLE 6.27 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN	m=	115.2	117.1	116.3	117.5	116.7	114.2
	s.d.=	9.3	10.9	13.2	12.7	13.2	17.4
	med=	116	116	116.5	116	115	118
MEN	m=	117.2	118.0	117.5	118.6	119.6	114.9
	s.d.=	12.8	12.8	14.3	16.0	14.9	16.1
	med=	118	119	118.5	120	122	115
DISCUSSION (n=31couples)							
WOMEN	m=	116	116.6	116.4	117.1	116.0	116.5
	s.d.=	11.8	11.7	15.1	12.2	14.2	11.6
	med=	118	117	118	119.5	115	115.5
MEN	m=	117.7	116.0	118.5	119.5	119.5	118.9
	s.d.=	12.3	13.7	13.7	14.8	15.0	15.1
	med=	116	113	116	117	122	120.5

Table 6.28 presents results of statistical analysis investigating differences among scores obtained per gender and Condition for each sub-scale of the DAS at Baseline. As noted in Table 6.28, there were no significant main effects of gender or Condition, nor were there significant gender by Condition interaction effects observed among scores obtained on any of the sub-scales at Baseline.

Table 6.29 presents results of statistical analysis investigating differences among scores obtained per Condition and gender across measurement intervals for each sub-scale of the DAS.

As noted in Table 6.29, there was a significant main effect of time for both the Affection and Consensus sub-scales only. For the Affection sub-scale, this suggested a significant decrease in affectional expression over time, while for the Consensus sub-scale, an increase in consensus over time was suggested. However, there were no significant main effects of Condition or gender, nor were there significant interaction effects of Condition by gender, Condition by time, gender by time or Condition by gender by time for any sub-scale.

Figure 6.8 presents mean change scores obtained on the Affection Sub-Scale for the entire sample (n=246 participants) across measurement points. In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq .25$. By this criterion, levels of affectional expression were significantly lower, when compared to Month One, at Month Six only.

Figure 6.9 presents mean scores obtained on the Affection Sub-Scale for the entire sample (n=246 participants) across measurement points. Higher raw scores on the Affection sub-scale indicated higher levels of affectional expression. As observed in Figure 6.9, with the exception of Month Four, affectional expression at each measurement interval decreased relative to Baseline. This effect was most clearly evident at Month Six.

TABLE 6.28

DAS: Results of 4 (Condition) by 2 (Gender) ANOVA'S Conducted on Baseline Scores per Sub-Scale
(n =123 Couples)

SUB-SCALES		GENDER	CONDITION	GENDER x CONDITION
Affection	df=	1; 237	3; 237	3; 237
	F=	0.91	1.35	0.43
	p=	0.341	0.25	0.73
Cohesion	df=	1; 237	3; 237	3; 237
	F=	1.9	1.41	1.18
	p=	1.17	0.75	0.32
Consensus	df=	1; 237	3; 237	3; 237
	F=	0.13	0.47	0.16
	p=	0.72	0.71	0.92
Satisfaction	df=	1; 237	3; 237	3; 237
	F=	0.02	0.82	0.29
	p=	0.89	0.5	0.83
Total	df=	1; 237	3; 237	3; 237
	F=	0.32	0.63	0.39
	p=	0.57	0.59	0.76

TABLE 6.29

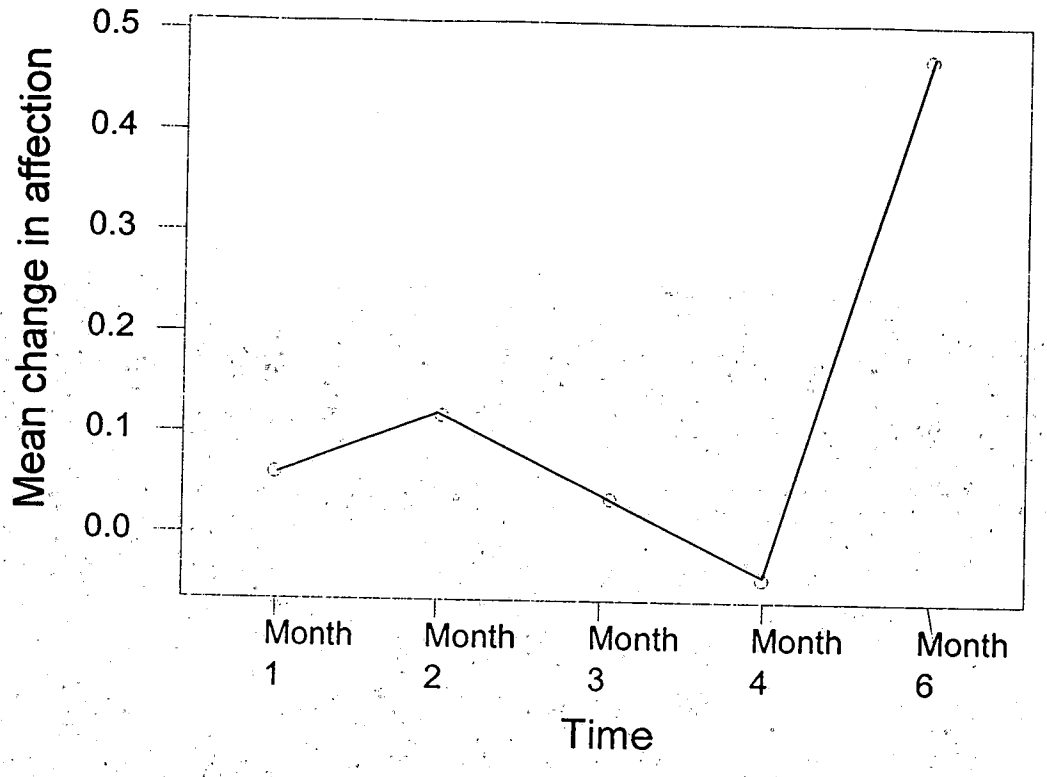
DAS: Results of Repeated Measures ANOVA per Sub-Scale
(n=123 couples)

SUB-SCALE	CONDITION	GENDER	CONDITION X GENDER	TIME	CONDITION X TIME	GENDER X TIME	CONDITION X GENDER X TIME
Affection							
df=	3,220	1,220	3,220	3.95; 880	11.85; 880	3.95; 880	11.85; 880
F=	2.08	0.66	0.33	6.64	1.02	0.19	0.96
p=	0.1	0.42	0.80	0.01*	0.43	0.94	0.49
Cohesion							
df=	3,223	1,223	3,223	3.56; 892	10.67; 892	3.56; 892	10.67; 892
F=	0.38	1.39	0.50	1.6	1.5	0.32	1.09
p=	0.77	0.24	0.71	0.18	0.13	0.85	0.37
Consensus							
df=	3,224	1,224	3,224	3.9; 896	11.69; 896	3.9; 896	11.69; 896
F=	0.60	0.60	0.60	6.1	0.93	0.96	0.58
p=	0.60	0.44	0.64	0.01*	0.51	0.43	0.86
Satisfaction							
df=	3,218	1,218	3,218	3.7; 872	11.17; 872	3.7; 872	11.17; 872
F=	0.40	0.40	0.10	1.9	1.1	1.4	0.37
p=	0.79	0.55	0.98	0.11	0.34	0.23	0.97
Total							
df=	3,213	1,213	3,213	3.8; 852	11.57; 852	3.9; 852	11.57; 852
F=	0.24	0.03	0.11	2.2	1.15	0.39	0.79
p=	0.87	0.95	0.96	0.08	0.32	0.81	0.66

Key: * $p \leq .05$

FIGURE 6.8

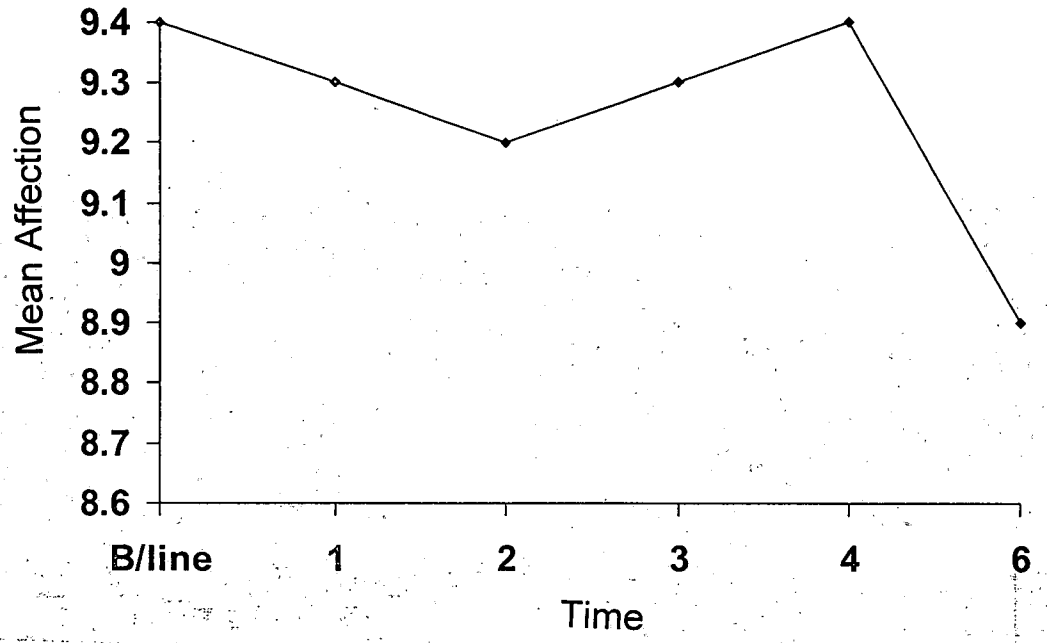
DAS (Affection Sub-Scale): Mean Change Scores (Month One-Six)
(n=246 participants)



Mean Change Scores: Month 1-Mean=0.06, s.d.=1.6;
Month 2-Mean=0.12, s.d.=1.7; Month 3-Mean=0.04, s.d.=1.7;
Month 4-Mean= -0.04, s.d.=1.6; Month 6-Mean=0.48, s.d.=1.7.

FIGURE 6.9

DAS (Affection Sub-Scale): Mean Scores (Baseline-Month Six)
(n=246 participants)



(Key: 1=Month One;2=Month Two;3=Month Three;4=Month Four;6=Month Six)
Mean Change Scores: Baseline-Mean= 9.37, s.d.=1.8;Month 1-Mean=9.31, s.d.=2.0;Month 2-Mean=9.23, s.d.=2.1; Month 3-Mean=9.33, s.d.=2.0; Month 4-Mean=9.40, s.d.=2.1; Month 6-Mean=8.90, s.d.=2.2

Figure 6.10 presents mean change scores obtained on the Consensus sub-scale for the entire sample.

In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq .94$. By this criterion, levels of consensus were significantly higher, when compared to Month One, at each subsequent measurement interval.

Figure 6.11 presents mean scores obtained on the Consensus sub-scale for the entire sample (n=246 participants). Higher raw scores on this sub-scale indicated higher levels of consensus within the relationship. Figure 6.11 clearly demonstrates increasing consensus occurring across measurement intervals (with a slight decrease observed at Month Six).

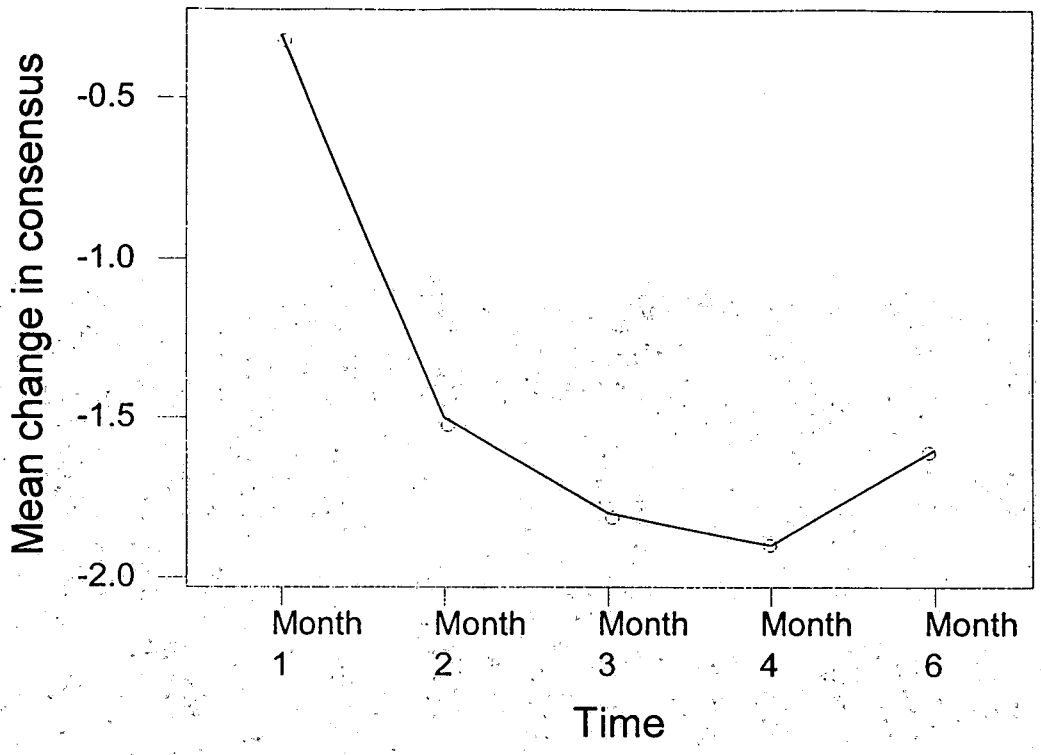
MRI

Table 6.30 presents mean raw scores, standard deviations and median scores obtained by men and women in each Condition on the MRI at each measurement interval. For the MRI, higher raw scores indicated lower satisfaction with the spouse's current role performance.

In examining the data, it appeared that mean scores obtained by women exceeded those obtained by men in each Condition and at each measurement point. For the median scores, a similar pattern of results was observed (except for those scores obtained by women and men in the Lecture Condition at

FIGURE 6.10

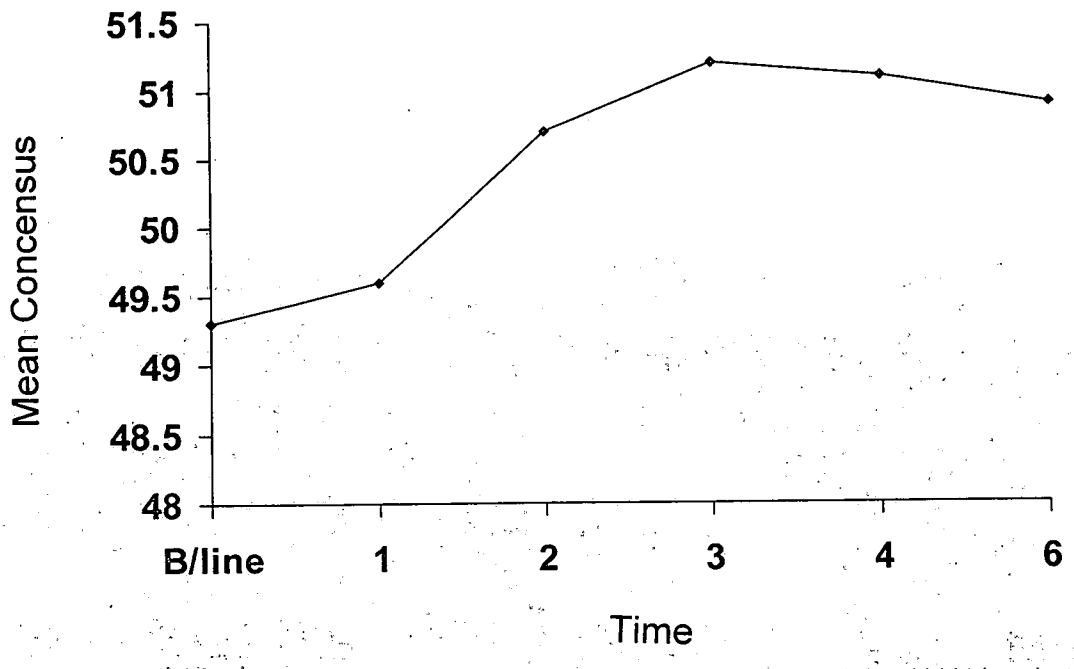
DAS (Consensus Sub-Scale): Mean Change Scores (Month One-Six)
(n=246 participants)



Mean Change Scores: Month 1-Mean= -0.3, sd=5.2;
Month 2-Mean= -1.5, sd=6.4; Month 3-Mean= -1.8, sd=5.8;
Month 4-Mean= -1.9, sd=5.8; Month 6-Mean= -1.6, sd=5.7.

FIGURE 6.11

DAS (Consensus Sub-Scale): Mean Scores (Baseline-Month Six)
(n=246 participants)



(Key: 1=Month One; 2=Month Two; 3=Month Three; 4= Month Four; 6=Month Six)
Mean Scores: Baseline –Mean=49.31,s.d.=5.9;Month 1-Mean= 49.62, s.d.=6.3;
Month 2-Mean= 50.74, s.d.=7.4; Month 3-Mean= 51.1, s.d.=7.0;
Month 4-Mean= 51.1, s.d.=7.4; Month 6-Mean= 50.92, s.d.=6.3.

TABLE 6.30

Marital Roles (MRI): Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 couples)

CONDITION	BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31couples)						
WOMEN						
m=	53.6	63.8	64.8	65.4	65.9	66.1
s.d.=	4.0	5.6	6.0	6.8	6.6	5.3
med=	53	63	64	64	64	65
MEN						
m=	49.6	60.7	61.8	61.5	61.9	60.8
s.d.=	5.0	6.1	4.8	6.8	5.2	4.9
med=	49	62	62.5	63	62	61
WORKBOOK ONLY (n=28 couples)						
WOMEN						
m=	53.4	63.0	64.3	63.7	65.0	65.4
s.d.=	4.9	6.2	7.2	7.1	6.1	6.9
med=	52	63	63	64	63	65
MEN						
m=	48.5	58.6	59.1	60.3	60.1	60.6
s.d.=	6.3	6.0	4.5	4.8	4.6	3.9
med=	48	61	60	62	62	62

TABLE 6.30 (Cont.)

CONDITION		BASELINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
LECTURE (n=33 couples)							
WOMEN							
	m=	55.0	62.4	64.5	65.2	64.1	66.0
	s.d.=	6.2	4.2	4.7	4.2	5.1	6.1
	med=	55	61	64	65	63	64
MEN							
	m=	51.3	59.2	59.8	60.4	61.1	61.5
	s.d.=	7.0	4.5	4.2	4.3	3.9	4.3
	med=	48	59	61	61	63	63
DISCUSSION (n=31couples)							
WOMEN	m=	52.7	62.0	63.2	64.1	64.0	65.6
	s.d.=	5.8	7.0	6.4	7.3	7.6	7.4
	med=	51	60.5	63	63	64	65.5
MEN	m=	49.1	54.5	57.7	58.1	59.4	59.5
	s.d.=	6.9	7.2	5.9	6.1	6.5	6.1
	med=	48.5	56	59.5	59	60	61.5

Month Four). For both genders in each Condition, there appeared to be an increase in scores across measurement points indicating increasing dissatisfaction with partners' role performance.

In analysis at Baseline, there were significant main effects of gender (d.f.=1, 237; F=.28.07; p=.01). Scores obtained by women (m=53.72; s.d.=5.4) significantly exceeded those obtained by men (m=49.8; s.d.=67.4), indicating that women in the sample experienced greater dissatisfaction with their partners' role performance than did the men. However, there were no significant main effects of Condition (d.f.=3, 237; F=1.94; p=.13), nor was there a significant gender by Condition interaction effect (d.f.=3, 237; F=.12; p=.95).

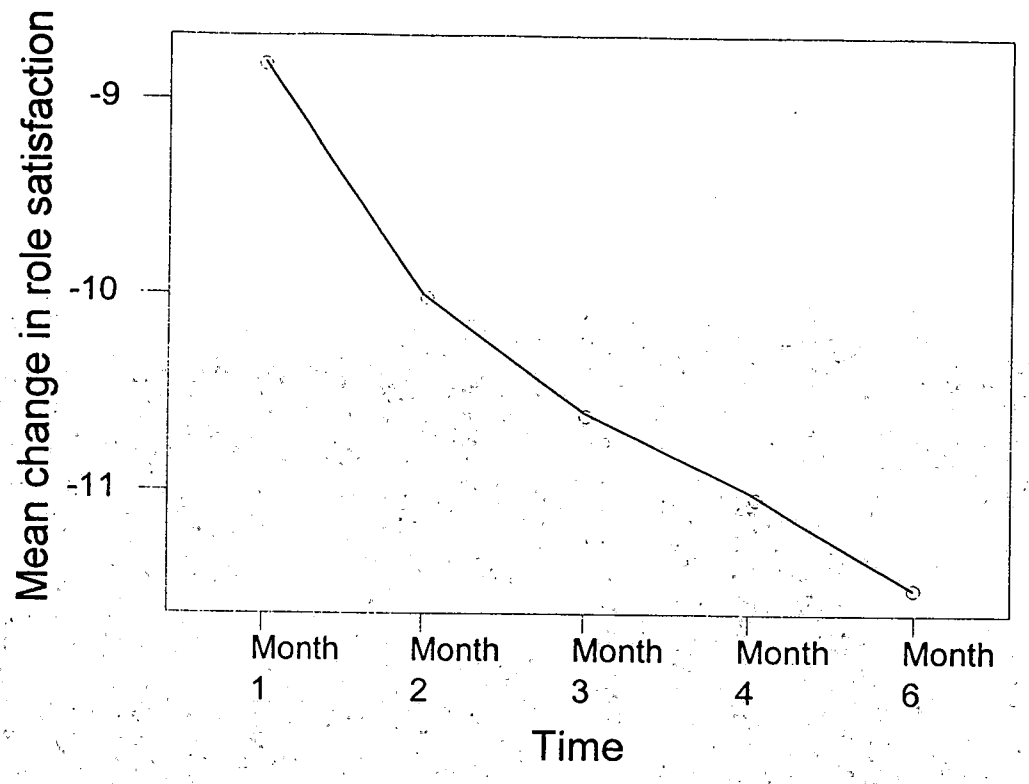
In investigating differences between genders and among Conditions across measurement intervals, there were no significant main effects of Condition (d.f.=3, 226; F=1.92; p=.13) or gender (d.f.=1,226; F=.57; p=.450), nor was there a significant Condition by gender interaction effect (d.f.=3, 226; F=.52; p=.67). Further, although there was a significant main effect of time (d.f.=3.69, 904; F=19.54; p=.001), indicating significant decreases in satisfaction with partners' role performance across measurement intervals, there were no significant interaction effects of Condition by time (d.f.=11.06, 904; F=1.33; p=.2), gender by time (d.f.=3.7, 904; F=1.2; p=.32) or Condition by gender by time (d.f.=11.06, 904; F=1.0; p=.44).

Figure 6.12 presents mean change scores obtained on the MRI the entire sample (n=246 participants) across measurement points.

In post-hoc testing, per the Studentised Range Statistic, the critical difference (cd) required for determination of significance at $p \leq .05$ among mean change scores was $cd \geq .87$. By this criterion, satisfaction with partners' role performance significantly decreased (when compared to Month One) at each subsequent measurement interval. Additionally, there were significant

FIGURE 6.12

MRI: Mean Change Scores (Month One-Six)
(n=246 participants)



Mean Change Scores: Month 1-Mean= -8.8, sd=7;
Month 2-Mean= -10, sd=6.7; Month 3-Mean= -10.6, sd=7.1;
Month 4-Mean= -11, sd=6.5; Month 6-Mean= -11.5, sd=6.4.

decreases in satisfaction observed between Month Two and Month Four and Month Two and Month Six.

These variations in satisfaction with partners' role performance are clearly illustrated in Figure 6.13, which presents mean scores obtained on the MRI for the entire sample (n=246 participants) across measurement points. Increasing scores on the MRI suggest decreasing levels of satisfaction with partners' role performance which are noted here for both genders.

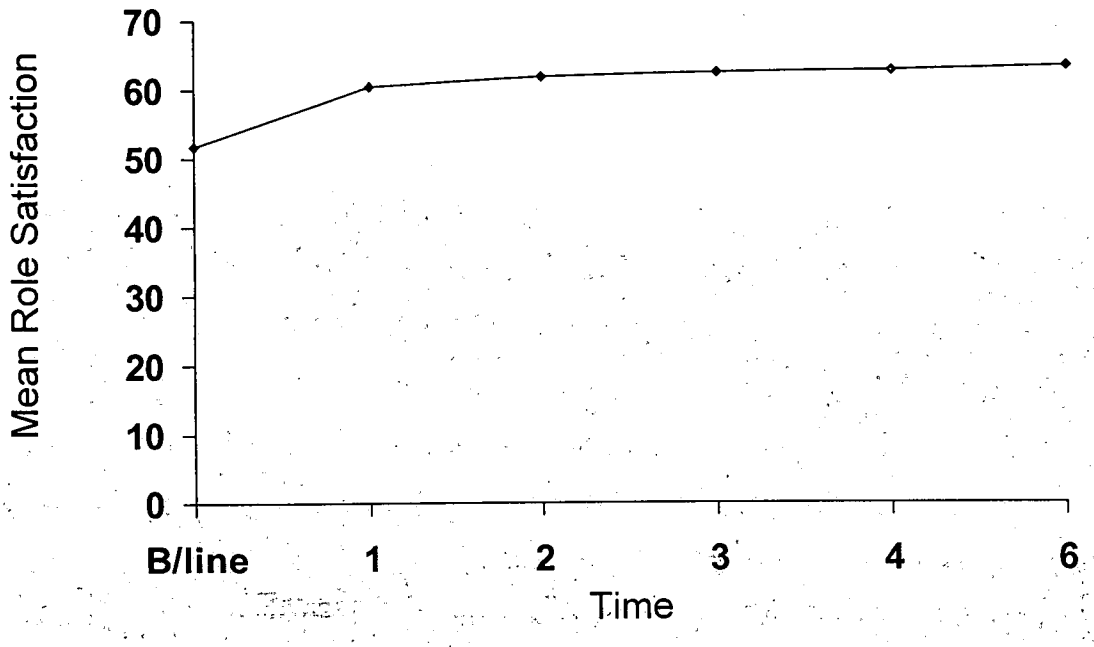
iii) Summary

Statistical analysis conducted among scores obtained on measures drawn from the Relationship Well-Being domain of the transition to parenthood revealed few significant findings. Again, there were no significant differences among Conditions observed on any measure. However, for the Affection and Consensus sub-scales of the DAS and for the MRI, there were significant differences among change scores obtained by the entire sample over time.

For the DAS (Affection sub-scale), the results appeared to suggest decreases in affectional expression over the measurement period for the entire sample, with the greatest decreases observed at Month Six. For the DAS (Consensus sub-scale), there was a general increase in relationship consensus over the measurement period (with a very slight decrease observed at Month Six). It must be noted that the significant differences in change scores observed on these measures were of between 0.5 of a score point (Affection sub-scale) and 1.3 score points (Consensus sub-scale) reflecting mean score changes of between one score point (Affection sub-scale) and two score points (Consensus sub-scale). Although statistically significant, it can only be assumed, in the absence of a caseness criterion, that these changes are unlikely to have been of clinical utility.

FIGURE 6.13

MRI: Mean Scores (Baseline-Month Six)
(n=246 participants)



Key: 1=Month One; 2=Month Two; 3=Month Three; 4= Month Four; 6=Month Six)
Mean Scores: Baseline- Mean 51.74;s.d.=6.2;Month 1-Mean= 60.5, s.d.=6.5; Month 2-Mean= 61.8, s.d.=6.1; Month 3-Mean= 62.4, s.d.=6.5; Month 4-Mean= 62.7, s.d.=6.1; Month 6-Mean= 63.2, s.d.=6.3.

For the MRI, scores obtained by women significantly exceeded those obtained by men at Baseline only (suggesting greater dissatisfaction among women with their partner's instrumental role performance at that measurement interval). Although this gender difference did not persist through subsequent measurement intervals, there was a significant change, in a negative direction, among scores obtained by the entire sample over time. This finding suggested increasing dissatisfaction with spouse's current role (for the entire sample: both genders and all Conditions) across measurement intervals.

c) PREGNANCY WELL-BEING MEASURES

i) Plan of Analysis

Measures within this domain included the Support in Pregnancy Questionnaire (SIP) and the Maternal Adjustment and Maternal Attitudes Questionnaire (MAMA). Both these measures were completed by women only. The SIP was completed at Baseline only and the MAMA was completed both at Baseline and Month Six.

In initial analyses, in order to investigate differences among Conditions at Baseline, a series of One Way ANOVA's were conducted on each sub-scale of the SIP (Partner Support, Maternal Attitude, Parental Support and Family General Support) and the MAMA (Body Image, Somatic Symptoms, Marital Relationship, Attitudes to Sex, Attitudes to Pregnancy/Baby and Total).

In subsequent analysis, a Repeated Measures ANOVA was conducted on six of the sub-scales of the MAMA (Body Image, Somatic Symptoms, Marital Relationship, Attitudes to Sex, Attitudes to Pregnancy/Baby and Total).

For both the SIP and the MAMA, higher raw scores indicated lower levels of perceived support (SIP) or adjustment (MAMA).

ii) Analysis

SIP

Table 6.31 presents mean raw scores, standard deviations and median scores obtained by women in each Condition on each sub-scale of the SIP. For each sub-scale, the potential score range was from 0 (high support) to 49 (low support). Across Conditions and sub-scales, mean scores ranged from 12.7 (Discussion Condition for Partner Support sub-scale) to 17.3 (Discussion Condition for Parent Support sub-scale); median scores ranged from 11 (Discussion Condition for Partner Support sub-scale) to 15.5 (Discussion Condition for both the General Support and Parent Support sub-scales). In that both the range of mean and median scores were within the second lowest quartile, this would appear to suggest relatively high levels of perceived support across the entire sample. (There is no "cut-off" score indicating a concept of caseness available for the SIP). Further examination of the data suggested that women in the Workbook-Only Condition obtained the lowest scores on three of the four sub-scales (General Support, Maternal Attitude and Partner Support), indicating that these women perceived greater support and experienced more positive maternal attitudes than women in the other Conditions.

TABLE 6.31

SIP: Mean Scores/Standard Deviations/Median Scores per Condition
(n=123 participants)

CONDITION	GENERAL SUPPORT	MATERNAL ATTITUDE	PARENT SUPPORT	PARTNER SUPPORT
CONTROL (n=31)				
m=	15.6	14.1	15.4	13.7
s.d.=	6.2	6.8	8.3	6.6
med=	14	12	14	12
WORKBOOK ONLY (n=28)				
m=	14.8	15.0	14.9	12.7
s.d.=	6.7	5.1	6.1	5.3
med=	13	14	13.5	11.5
LECTURE (n=33)				
m=	15.2	15.8	17.2	15.3
s.d.=	5.8	8.2	8.9	5.9
med=	14	14	14	15
DISCUSSION (n=31)				
m=	16.8	15.5	17.3	12.7
s.d.=	8.1	5.5	9.1	5.7
med=	15.5	15	15.5	11

Table 6.32 presents results of statistical analysis investigating differences among scores obtained per Condition for each sub-scale of the SIP. As noted in Table 6.32, there were no significant differences among Conditions for any sub-scale.

MAMA

Table 6.33 presents mean raw scores, standard deviations and median scores obtained by women in each Condition on each sub-scale of the MAMA at Baseline. For each sub-scale, the potential score range was from 0 (high adjustment) to 12 (low adjustment). Across Conditions and sub-scales, mean scores ranged from 1.5 (Discussion Condition for Marital Relationships sub-scale) to 2.4 (Control, Lecture and Discussion Condition for the Body Image sub-scale). Median scores ranged from 1.4 (Workbook-Only Condition on the Attitude to Baby sub-scale) to 2.4 (Lecture Condition on the Body Image sub-scale). This range of mean and median scores in the lowest quartile appears to suggest relatively high levels of adjustment among this sample. (Again, there is no cut-off score for this measure). As observed in Table 6.33, the lowest scores obtained by women in each Condition appeared to be on the Marital Relationships sub-scale.

Table 6.34 presents raw mean scores, standard deviations and median scores obtained by women in each Condition on each sub-scale of the MAMA at Month Six. In comparing Tables 6.33 and 6.34, there appeared to be differences in each Condition for scores obtained on the Somatic Symptoms, Marital Relationships, Attitude to Pregnancy/Baby and Total sub-scales. On the Marital Relationships and Total sub-scales, scores obtained by women in each Condition at Month Six (Table 6.34) appeared to have increased, suggesting increasing dissatisfaction, while on both the Somatic Symptoms and Attitude to Baby sub-scales, scores obtained by women in each Condition appeared to have decreased, suggesting reduced somatic symptomatology and increasingly positive attitudes to early motherhood.

Table 6.35 presents results of statistical analysis investigating differences among scores obtained per Condition for each sub-scale of the MAMA at Baseline. As noted in Table 6.35, there were no significant differences among Conditions for any sub-scale.

TABLE 6.32

SIP: One Way ANOVA Results per Sub-Scale
(n=123 participants)

SUB-SCALE	Df	F	P
General Support	3; 121	0.50	0.68
Maternal Attitude	3; 121	0.44	0.73
Parental Support	3; 121	0.78	0.51
Partner Support	3; 121	1.2	0.32

TABLE 6.33

MAMA-Baseline: Mean Scores/Standard Deviation/Median per Condition
(n=123 participants)

CONDITION	BODY IMAGE	SOMATIC SYMPTOMS	MARITAL RELATIONSHIPS	ATTITUDE: SEX	ATTITUDE: PREGNANCY	TOTAL
CONTROL (n=31)						
m=	2.4	2.3	1.6	2.1	1.9	1.9
s.d.=	0.5	0.4	0.5	0.5	0.4	0.3
med=	2.3	2.3	1.4	1.9	1.8	2.0
WORKBOOK ONLY (n=28)						
m=	2.3	2.3	1.6	2.0	1.9	1.9
s.d.=	0.5	0.3	0.4	0.5	0.4	0.3
med=	2.3	2.2	1.5	2.0	1.8	2.0
LECTURE (n=33)						
m=	2.4	2.4	1.8	2.2	2.0	2.0
s.d.=	0.4	0.4	0.5	0.5	0.5	0.3
med=	2.4	2.3	1.8	2.2	1.9	2.2
DISCUSSION (n=31)						
m=	2.4	2.2	1.5	2.2	1.9	2.0
s.d.=	0.4	0.3	0.4	0.4	0.4	0.2
med=	2.4	2.2	1.5	2.2	2.0	2.0

TABLE 6.34

MAMA-Month Six: Mean Scores/Standard Deviation/Median Scores per Condition
(n=123 participants)

CONDITION	BODY IMAGE	SOMATIC SYMPTOMS	MARITAL RELATIONSHIPS	ATTITUDE: SEX	ATTITUDE: BABY	TOTAL
CONTROL (n=31)						
m=	2.4	1.8	1.8	2.0	1.5	2.1
s.d.=	0.5	0.4	0.6	0.6	0.2	0.4
med=	2.3	1.8	1.7	1.8	1.5	1.8
WORKBOOK ONLY (n=28)						
m=	2.3	1.7	1.9	2.2	1.5	2.0
s.d.=	0.5	0.3	0.5	0.6	0.2	0.3
med=	2.3	1.7	1.9	2.1	1.4	1.8
LECTURE (n=33)						
m=	2.4	1.8	1.9	2.1	1.5	2.2
s.d.=	0.5	0.3	0.6	0.6	0.4	0.4
med=	2.4	1.8	2.0	2.1	1.4	1.9
DISCUSSION (n=31)						
m=	2.4	1.8	1.8	2.2	1.5	2.4
s.d.=	0.6	0.3	0.5	0.6	0.3	0.4
med=	2.3	1.7	1.8	2.1	1.5	1.9

TABLE 6.35

MAMA: One Way ANOVA Results per Sub-Scale at Baseline
(n=123 participants)

SUBSCALE	df	F	P
Body Image	3; 121	0.42	0.74
Somatic Symptoms	3; 121	2.74	0.07
Marital Relationships	3; 121	2.3	0.09
Attitude: Sex	3; 121	0.63	0.59
Attitude: Pregnancy	3; 121	0.25	0.86
Total	3; 121	1.4	0.26

Table 6.36 presents results of statistical analysis investigating differences among scores obtained per Condition across measurement intervals (Baseline and Month Six) for each sub-scale of the MAMA. As noted in Table 6.36, although there were no significant main effects of Condition for any sub-scale, there were significant main effects of time for four of the six sub-scales for the entire sample: Somatic Symptoms, Marital Relationships, Attitudes to Pregnancy/Baby and Total. There were no significant interaction effects of Condition by time for any sub-scale.

Table 6.37 presents mean scores and standard deviations (Baseline and Month Six) for each sub-scale in which significant main effects for time were observed. As observed in Table 6.37, mean scores for the Somatic Symptoms and Attitudes to Pregnancy/Baby sub-scales significantly decreased from Baseline to Month Six. However, for both the Marital Relationship and Total sub-scales, mean scores significantly increased over time. These results confirm the earlier observations made on the raw data and will be considered in more detail below.

iii) Summary

There were no significant differences among Conditions observed on either the SIP or the MAMA at Baseline. However, on the MAMA, there were two sub-scales which approached significance: Somatic Symptoms and Marital Relationships. On the Somatic Symptoms sub-scale, women in the Lecture Condition obtained the highest mean score, while women in the Workbook-Only Condition obtained the lowest mean score. On the Marital Relationships sub-scale, women in the Lecture Condition, once again, obtained the highest mean score, while women in the Control Conditon obtained the lowest mean score.

There were significant findings over time observed for the entire sample on four sub-scales of the MAMA: Somatic Symptoms, Marital Relationships, Attitude to Pregnancy/Baby and Total. For the Somatic Symptoms sub-scale and the Attitudes to Pregancy/Baby sub-scales, scores significantly

TABLE 6.36

MAMA: Repeated Measures ANOVA Results for Body Image/Somatic Symptoms/Marital Relationship/Attitude To Sex/Total Sub-Scales (n=123 participants)

SUB-SCALE		CONDITION	TIME	CONDITION X TIME
Body Image	df=	3,114	1; 114	3; 114
	F=	0.44	0.11	0.31
	p=	0.73	0.73	0.82
Somatic Symptoms	df=	3,115	1; 115	3; 115
	F=	2.25	244.49	2.4
	p=	0.86	0.001*	0.08
Marital Relationship	df=	3,115	1; 115	3; 115
	F=	1.21	38.54	1.12
	p=	0.31	0.001*	0.35
Attitude: Sex	df=	3,115	1; 115	3; 115
	F=	0.60	0.27	0.83
	p=	0.62	0.61	0.44
Attitude: Pregnancy/Baby	df=	3,115	1; 115	3; 115
	F=	0.40	185.2	0.07
	p=	0.79	0.001*	0.98
Total	df=	3,115	1; 114	3; 114
	F=	1.0	29.27	1.7
	p=	0.41	0.001*	0.18

Key: * $p \leq .05$

TABLE 6.37

MAMA: Mean Scores/Standard Deviations per Somatic Symptoms/Marital Relationship/Attitude: Pregnancy/Total Sub-Scales at Baseline/Month Six (n=123 participants)

TIME		SUB-SCALE			
		SOMATIC SYMPTOMS	MARITAL RELATIONSHIP	ATTITUDE: PREGNANCY/BABY	TOTAL
Baseline	m=	2.3	1.6	1.9	1.7
	s.d.=	0.4	0.4	0.4	0.5
Month Six	m=	1.8	1.8	1.5	2.0
	s.d.=	0.3	0.4	0.30	0.4

decreased, indicating a significant reduction in somatic symptoms in the post-natal period and increasingly positive attitudes toward the new infant. Scores on both the Marital Relationship/Total sub-scales significantly increased, indicating decreased satisfaction with the parental relationship and over-all dissatisfaction among women in the post-natal period.

d) SOCIAL SUPPORT

i) Plan of Analysis

There was one measure within this domain: The Family Support Scale (FSS). This Scale was completed by both men and women in each Condition at Month Six only. To investigate differences between genders and among Conditions, a 4(Condition) by 2(gender) ANOVA was conducted.

ii) Analysis

Table 6.38 presents mean raw scores, standard deviations and median scores obtained by women and men in each Condition on the FSS. For the FSS, the potential score range was 0 (no family support) to 25 (maximum family support). For men in the sample, as noted in Table 6.38, mean scores ranged from 18 (Workbook-Only Condition) to 21.8 (Discussion Condition), with median scores ranging from 18 (Control and Workbook-Only Condition) to 22 (Discussion Condition). For women, mean score ranges from 18.2 (Workbook-Only Condition) to 20.2 (Lecture Condition), with median scores ranging from 17 (Workbook-Only Condition) to 20 (Discussion Condition). This range of scores, with mean and median scores within the upper quartile, would appear to indicate relatively high levels of perceived family support among this population. (Again, there is no "cut-off" score for the FSS.)

TABLE 6.38

FSS: Mean Scores/Standard Deviations/Median Scores per Condition per Gender
(n=123 participants)

CONDITION	MEN	WOMEN
CONTROL (n = 31couples)		
m=	20.9	19.5
s.d.=	11.8	6.7
med=	18	19
WORKBOOK ONLY (n = 28 couples)		
m=	18.0	18.2
s.d.=	6.2	6.7
med=	18	17
LECTURE (n=33 couples)		
m=	21.1	20.2
s.d.=	8.4	7.9
med=	19	19
DISCUSSION (n=31 couples)		
m=	21.8	18.4
s.d.=	7.4	6.9
med=	22	20

Statistical analysis indicated that there were no main effects of gender (d.f.=1, 238; F=2.4; p=.12) or Condition (d.f.=3, 238; F=1.2; p=.30), nor were there significant gender by Condition interaction effects (d.f.=3, 238; F=.53;p=.67).

e) COPING

i) Plan of Analysis

Within this domain, there were two measures: The Coping Effectiveness Scale (CES) and The Parenting Stress Index (PSI). Both women and men in each Condition completed these questionnaires at Month Six. To investigate differences between genders and among Conditions on each sub-scale of the CES (Partner, Self and Total) and the PSI (Difficult Child, Parental Distress, Parent-Child and Total), a series of 4(Condition) by 2(gender) ANOVA's were conducted.

CES

Table 6.39 presents mean raw scores, standard deviations and median scores obtained by women and men in each Condition on each sub-scale of the CES. For Partner and Self sub-scales of the CES, the potential score range is 0 (low coping) to 15 (high coping); for the Total sub-scale, the potential score range is 0 (low coping) to 30 (high coping). For the Partner sub-scale, both the mean and median scores, which were in the third quartile, were virtually identical for both genders and in each Condition; for the Self sub-scale, a similar pattern of results was observed. For the Total sub-scale, the highest mean and median scores were obtained in the Discussion Condition. However, the differences between genders and among Conditions on this sub-scale were minimal. This range of mean and median scores across genders and Conditions on each sub-scale (with mean and median scores in the third quartile) appeared to indicate that coping effectiveness was perceived in the sample as relatively high.

Table 6.40 presents results of statistical analysis investigating differences among scores obtained per Condition and gender for each sub-scale of the CES. As noted in Table 6.40, there were no significant main effects of Condition or gender, nor were there significant Condition or gender interaction effects for any sub-scale.

PSI

Table 6.41 presents mean raw scores, standard deviations and median scores obtained by women and men in each Condition on each sub-scale of the PSI. For the three sub-scales of the PSI (Difficult Child, Parental Distress and Parent-Child), the potential range of scores is 0 (an absence of stress experienced by the parent in each domain) to 60 (maximum stress). For the Total sub-scale (which represents a composite of the other three sub-scales), the potential range of scores is 0 (absence of stress) to 180 (maximum stress). "Cut-off" scores are not provided for this measure.

For the Difficult Child sub-scale, mean and median scores for both genders and all Conditions were within the lower end of the second lowest quartile, indicating relatively low levels of stress. A similar pattern of results was observed for the Parent-Child sub-scale. For the Parental Distress sub-scale, the highest mean and median scores (in the upper end of the second quartile) for each gender were observed in each Condition (although scores obtained by each gender in each Condition on this sub-scale were very similar). This would appear to suggest somewhat higher levels of stress on this sub-scale (which specifically examines the distress experienced by a parent in his or her new role as parent [Abidin, 1990]). However, as these scores do not exceed the mid-point in the scoring range, it must be noted that although these scores are higher than scores obtained on the other sub-scales, they remain relatively low.

TABLE 6.39

CES: Mean Scores/Standard Deviations/Median Scores per Condition/Gender
(n=123 couples)

CONDITION		PARTNER	SELF	TOTAL
CONTROL (n=31 couples)				
WOMEN				
	m=	11.2	10.5	21.6
	s.d.=	2.5	2.4	4.6
	med=	12	10	21
MEN				
	m=	11.5	10.1	21.6
	s.d.=	2.3	2.5	3.7
	med=	12	11	22.5
WORKBOOK ONLY (n=28 couples)				
WOMEN				
	m=	11.7	10.4	22.2
	s.d.=	1.9	2.4	3.5
	med=	12	10	22
MEN				
	m=	11.7	10.1	21.7
	s.d.=	2.2	1.7	3.5
	med=	12	10	21

TABLE 6.39 (Cont.)

CONDITION		PARTNER	SELF	TOTAL
LECTURE				
(n=31 couples)				
WOMEN				
	m=	11.6	10.1	21.6
	s.d.=	2.1	2.5	3.1
	med=	12	11	22
MEN				
	m=	11.5	10.2	21.7
	s.d.=	2.4	2.1	3.9
	med=	12	10	22
DISCUSSION				
(n=28 couples)				
WOMEN				
	m=	11.9	10.1	22.3
	s.d.=	2.4	1.7	3.7
	med=	12	10	23
MEN				
	m=	11.6	10.3	22
	s.d.=	1.9	2.1	3.7
	med=	12	10	23

TABLE 6.40

CES: ANOVA Results per Sub-Scale (n=123 couples)

SUBSCALE	CONDITION	GENDER	CONDITION X GENDER
Partner			
df=	3; 236	1; 236	3; 236
F=	0.45	0.45	0.4
p=	0.72	0.72	0.97
Self			
df=	3; 236	1; 236	3; 236
F=	0.18	0.18	0.86
p=	0.91	0.91	0.97
Total			
df=	3; 236	1; 236	3; 236
F=	0.31	0.01	0.05
p=	0.91	0.95	0.99

TABLE 6.41

PSI: Mean Scores/Standard Deviation/Median Scores per Condition per Gender (n=123 couples)

CONDITION	DIFFICULT CHILD	PARENTAL DISTRESS	PARENT – CHILD	TOTAL
CONTROL (n=31 couples)				
WOMEN				
m=	20.3	26.2	16.1	63.2
s.d.=	7.3	8.0	5.0	15.6
med=	18	27	14	62.5
MEN				
m=	19.2	28.1	16.8	64.1
s.d.=	7.6	7.8	4.9	15.4
med=	16	27	15	61
WORKBOOK ONLY (n=28 couples)				
WOMEN				
m=	20.9	27.8	17.2	66.0
s.d.=	7.0	8.8	5.3	16.0
med=	20	26	14	66
MEN				
m=	19.3	24.4	16.1	59.3
s.d.=	5.4	6.1	4.7	14.1
med=	18	24	14	56

TABLE 6.41 (Cont.)

CONDITION	DIFFICULT CHILD	PARENTAL DISTRESS	PARENT –CHILD	TOTAL
LECTURE (n=33 couples)				
WOMEN				
m=	19.3	27.8	16.0	63.2
s.d.=	6.9	10.4	6.0	20.7
med=	16	27	14	60
MEN				
m=	20.4	27.2	17.4	64.9
s.d.=	5.4	7.2	7.8	16.0
med=	20	26	15	62
DISCUSSION (n=31couples)				
WOMEN				
m=	20.0	26.1	16.8	62.9
s.d.=	6.3	8.1	4.6	14.8
med=	18.5	25.5	14.5	63
MEN				
m=	19.8	25.1	16.6	61.5
s.d.=	5.0	7.5	3.8	12.1
med=	20.5	24	16	62

Table 6.42 presents results of statistical analysis investigating differences among scores obtained per gender and Condition for each sub-scale of the PSI. As noted in Table 6.42, there were no significant main effects of gender or Condition, nor were there significant gender or Condition interaction effects for any sub-scale.

iii) Summary

There were no significant differences between genders or among Conditions on any of the sub-scales of either the CES or the PSI, nor were there significant interaction effects.

4. PLAN OF ANALYSIS: PART TWO

In Part Two, data obtained on measures from two domains (Psychological Well-Being; Relationship Well-Being) were re-analysed in order to investigate differences among couples across measurement intervals. The re-analysed measures included the Hospital Anxiety and Depression Scale (Psychological Well-Being Measures) and the Communication Scale, The Dyadic Adjustment Scale and the Marital Role Inventory (Relationship Well-Being Measures). The re-analysis was based on a "couple score", which was derived by subtracting raw scores obtained by men from raw scores obtained by women in each couple at each measurement interval. (Statistical analysis was subsequently conducted on change scores obtained from this data and derived by subtracting the raw score obtained per couple at each measurement interval from the raw score obtained by that couple at Baseline.) The author is grateful to Professor A. Bowman, University of Glasgow, for his advice on this particular analysis.

The rationale for this re-analysis of data was based on a major consideration: individual parental psychological well-being (as identified in perceptions of

TABLE 6.42

PSI: ANOVA Results per Sub-Scale (n=123 couples)

SUB-SCALE		CONDITION	GENDER	CONDITION X GENDER
Difficult Child	df=	3; 234	1; 234	3; 234
	F=	0.002	0.694	0.64
	p=	1.0	0.41	0.59
Parental Distress	df=	3; 237	1; 237	3; 237
	F=	0.71	1.08	1.5
	p=	0.55	0.30	0.21
Parent - Child	df=	3; 237	1; 237	3; 237
	F=	0.06	0.001	0.98
	p=	0.98	0.97	0.40
Total	df=	3; 237	1; 237	3; 237
	F=	0.29	1.0	1.3
	p=	0.83	0.30	0.26

psychological and relationship well-being on standard measures) is, arguably, affected (either positively or negatively) by a partner's well-being. Ballard, et al, (1994) observed that fathers were significantly more likely to demonstrate psychological morbidity if their partners were also demonstrating morbidity. It was considered important, therefore, to examine both individual well-being (as in Part One) and couple well-being. In this latter context, a statistically significant effect (with the positive or negative direction of that effect dependant upon the measure under consideration) would indicate that couples (as opposed to individual parents) in one Condition had demonstrated significantly differing adjustment over the measurement period than couples in other Conditions. The rationale for re-analysing selected measures (drawn from two domains only) is that these selected measures explicitly described the individual psychological and relationship variables of greatest interest in this context.

Once again, results of statistical analysis were considered in each domain separately. Within each domain, and for each measure, analysis of data began with the examination of summary data (mean couple scores per Condition per measurement interval), presented here in appropriate Tables and followed by a brief discussion. As the couple scores were derived from a standard equation (mothers' scores minus fathers' scores), the sign (positive or negative) for each mean couple score obtained at each measurement interval in each Condition indicated relative differences in the magnitude of scores obtained for each gender. Positive-signed mean couple scores suggested that scores obtained by women exceeded those obtained by men; negative-signed mean couple scores indicated that scores obtained by men exceeded those obtained by women.

For each measure, Repeated Measures ANOVA was employed, following the same rationale discussed in Part One. Both normality and homogeneity of variance have been examined for each measure and the results of appropriate homogeneity of variance tests are reported in Appendix Three. Further, results of Mauchly's Test of Sphericity are reported in Appendix Four. Correction factors were applied per Huynh and Feldt (1976).

5. STATISTICAL ANALYSIS

a) PSYCHOLOGICAL WELL-BEING MEASURES

i) Plan of Analysis

Data obtained on both sub-scales of the HAD Scale (Anxiety and Depression sub-scales) were re-analysed. In Part One, only data obtained from men on the HAD Depression sub-scale were reported and analysed. As noted in Chapter Two, there are a number of items on standard measures of depression which, during the course of normal postpartum adjustment, would provide elevated scores for depression. Therefore, data obtained by women in the sample on the Depression sub-scale were not employed in earlier analysis. However, in devising a couple score for the present analysis, data obtained from women on the Depression sub-scale were included by necessity: in order to develop a depression couple score, it was essential to use data obtained by both men and women on the same measure. (Raw scores for data obtained by women on the Depression sub-scale is presented in Appendix Five.)

ii) Analysis

HAD Scale

Anxiety

Table 6.43 presents mean couple scores and standard deviations obtained on the HAD Scale (Anxiety sub-scale) in each Condition at each measurement interval.

The fact that most mean couple scores were positive-signed indicated that

TABLE 6.43

HAD Scale (Anxiety Sub-Scale): Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6) (n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	-0.19	-0.19	-0.80	-0.63	-1.00	-1.23
s.d.=	4.3	3.9	4.8	4.4	4.4	4.5
W/BOOK (n=28 couples)						
mean=	2.79	1.93	0.74	1.25	0.85	0.75
s.d.=	3.7	5.0	5.0	3.0	3.4	3.3
LECTURE (n=33 couples)						
mean=	1.76	1.7	1.2	1.66	1.94	1.79
s.d.=	4.1	3.9	3.8	4.5	5.3	3.5
DISCUSS. (n=31 couples)						
mean=	0.42	1.45	0.19	-0.84	-0.61	-0.23
s.d.=	3.7	4.5	4.7	5.0	4.9	4.4

mean raw scores obtained by women exceeded those obtained by men at the majority of measurement intervals (but with notable exceptions). This suggests that women were, generally, demonstrating higher levels of anxious symptomatology than men within each couple. Interestingly, in the Control Condition, this effect was reversed: mean raw scores obtained by men exceeded those obtained by women at each measurement interval and the magnitude of the couple score increased over time (indicating an increase in the difference between raw scores obtained by each gender). In the other Conditions, the couple scores either decreased over time or remained essentially unchanged. Further, in the Discussion Condition, mean raw scores obtained by men exceeded those obtained by women from Month Three to Month Six only.

In analysis, there was no significant effect of Condition (d.f.=3, 111; F=1.14; p=.34) or time (d.f.=3.6, 444; F=1.62; p=.175), nor was there a significant Condition by time interaction effect (d.f.=10.8, 444; F=1.1; p=.348).

Depression

Table 6.44 presents mean couple scores and standard deviations obtained on the HAD Scale (Depression sub-scale) in each Condition at each measurement interval.

As observed in Table 6.44, the positive-signed mean couple scores observed across measurement intervals indicated that women experienced higher levels of depressive symptomatology in each couple than did men. Again, this trend was reversed in the Control Condition (at Month One and between Months Three and Six). Interestingly, the mean couple scores obtained in the Control Condition were smaller (indicating smaller differences between raw scores obtained by each gender) than in the other Conditions.

In analysis, there was no significant main effect of Condition (d.f.=3, 111; F=.23; p=.88) or time (d.f.=3.67, 444; F=1.7; p=.2), nor was there a significant

TABLE 6.44

HAD Scale (Depression Sub-scale): Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	0.68	-0.16	0.13	-0.37	-0.71	-0.61
s.d.=	3.5	2.3	4.2	3.7	3.8	3.9
W/BOOK (n=28 couples)						
mean=	2.64	2.14	1.44	2.00	1.37	1.2
s.d.=	3.0	4.9	4.2	3.1	4.2	3.8
LECTURE (n=33 couples)						
mean=	2.82	2.00	1.49	1.94	2.36	2.30
s.d.=	3.9	4.2	3.8	3.9	5.1	4.83
DISCUSS. (n=31 couples)						
mean=	1.58	2.32	0.42	0.77	0.50	0.87
s.d.=	2.9	3.8	3.1	3.0	3.1	4.4

Condition by time interaction effect (d.f.= 1.01, 444; F=1.56; p=.109).

iii) SUMMARY

There were no significant main effects of Condition or time, nor were there significant Condition by time interaction effects observed in analysis of the mean couple scores obtained on any of the Psychological Well-Being Measures.

b) RELATIONSHIP WELL-BEING MEASURES

i) Plan of Analysis

Mean couple scores derived from data obtained on the Communication Scale (CS), each sub-scale (Affection, Cohesion, Consensus, Satisfaction and Total) of the Dyadic Adjustment Scale (DAS), and the Marital Role Inventory (MRI) were analysed.

ii) Analysis

CS

Table 6.45 presents mean couple scores and standard deviations obtained on the CS in each Condition at each measurement interval.

Examination of the data revealed that mean couple scores obtained in the

TABLE 6.45

CS: Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	-1.52	-3.94	-1.53	-2.20	-2.42	-0.81
s.d.=	7.1	6.7	5.8	9.6	7.4	10.4
W/BOOK (n=28 couples)						
mean=	-0.36	1.21	1.78	2.59	2.15	0.43
s.d.=	8.9	6.3	6.5	7.2	8.0	8.7
LECTURE (n=33 couples)						
mean=	0.19	0.24	-1.18	-0.23	0.7	-0.49
s.d.=	9.0	7.7	6.8	7.7	6.9	8.4
DISCUSS. (n=31 couples)						
mean=	-0.90	0.52	-1.1	-0.94	-0.44	1.29
s.d.=	6.1	5.9	5.3	6.6	6.6	7.3

Control Condition were all negative-signed, suggesting that raw scores obtained by men exceeded those obtained by women in each couple across measurement intervals in this Condition. This indicates greater satisfaction with couple communication among men in this Condition. In the other Conditions, there was obvious variability among scores without any discernible pattern to this variability. Couples scores obtained in the Lecture Condition were generally smaller (indicating smaller difference between male/female raw scores) than couple scores obtained in the other Conditions.

However, in analysis, there was no significant main effect of Condition (d.f.=3,111; F=.91; p=.44) or time (d.f.= 3.7, 436; F=.2; p=.93), nor was there a significant Condition by time interaction effect (d.f.=11.2, 436; F=1.4; p=.2).

DAS

Tables 6.46 to 6.50 present mean couple scores/standard deviations obtained on each sub-scale of the DAS (Affection, Cohesion, Consensus, Satisfaction and Total) in each Condition at each measurement interval.

Examination of Table 6.46 (DAS Affection sub-scale), where the majority of mean couple scores were positive-signed, indicated that raw scores obtained by women exceeded those obtained by men at the majority of measurement intervals in each Condition. In Table 6.47 (DAS Cohesion sub-scale) this trend was reversed with, for example, raw scores obtained by men exceeding those obtained by women at every measurement interval for both the Wordbook-Only and Lecture Conditions, and at five of the six measurement intervals in the Discussion Condition. Again, in Table 6.48 (DAS Consensus sub-scale) and Table 6.49 (DAS Satisfaction sub-scale), raw scores obtained by men exceeded those obtained by women at every measurement interval in the Discussion Condition, and on Table 6.50 (DAS Total sub-scale), raw scores obtained by men exceeded those obtained by women at every measurement

TABLE 6.46

DAS-Affection Sub-Scale: Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	0.63	0.77	0.43	0.9	0.52	-0.20
s.d.=	2.1	2.2	2.4	2.3	1.9	2.5
W/BOOK (n=28 couples)						
mean=	-0.14	-0.18	0.08	0.25	0.07	0.32
s.d.=	1.9	2.2	2.0	2.0	2.0	2.4
LECTURE (n=33 couples)						
mean=	0.303	0.30	0.16	0.09	-0.24	0.24
s.d.=	1.7	2.0	1.9	2.0	1.9	2.0
DISCUSS. (n=31 Couples)						
mean=	0.13	0.47	0.68	-0.16	0.18	-0.29
s.d.=	1.6	2.3	3.5	2.0	2.3	1.8

TABLE 6.47

DAS-Cohesion Sub-Scale: Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	0.07	0.45	-0.03	0.52	0.45	-0.23
s.d.=	2.3	3.7	4.2	4.0	3.9	3.8
W/BOOK (n=28 couples)						
mean=	-1.07	-0.93	-0.54	-1.00	-0.52	-0.39
s.d.=	3.0	3.8	4.0	3.6	3.68	3.84
LECTURE (n=33 couples)						
mean=	-1.73	-0.09	-0.16	-0.49	-0.64	-0.33
s.d.=	4.0	10.8	3.2	3.0	3.2	3.6
DISCUSS. (n=31 Couples)						
mean=	0.40	-0.1	-1.1	-0.71	-0.64	-0.61
s.d.=	3.9	3.4	3.4	3.8	3.7	3.3

TABLE 6.48

DAS-Consensus Sub-Scale: Mean Couple Scores/Standard Deviations
Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	0.70	3.03	2.10	2.17	2.52	0.42
s.d.=	6.8	5.3	8.2	10.1	9.2	6.9
W/BOOK (n=28 couples)						
mean=	-0.82	-0.21	-2.15	-1.96	0.00	0.00
s.d.=	6.7	8.0	8.2	8.5	7.6	6.8
LECTURE (n=33 couples)						
mean=	-0.55	1.09	1.00	0.24	-0.59	1.12
s.d.=	6.5	7.6	6.6	6.9	6.6	7.8
DISCUSS. (n=31 Couples)						
mean=	-0.36	-0.33	-0.84	-1.19	-1.79	-1.42
s.d.=	6.5	6.1	12.3	6.7	6.8	6.3

TABLE 6.49

DAS-Satisfaction Sub-Scale: Mean Couple Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	0.87	1.13	1.03	0.72	1.50	0.17
s.d.=	3.7	4.9	3.9	5.4	5.3	4.5
W/BOOK (n=28 couples)						
mean=	-0.46	-0.93	-0.85	-1.11	-1.77	0.00
s.d.=	3.8	2.9	4.6	5.3	4.3	4.3
LECTURE (n=33 couples)						
mean=	0.06	-0.73	0.29	-0.50	-1.52	-0.18
s.d.=	4.8	4.0	4.9	4.2	4.6	4.9
DISCUSS. (n=31 Couples)						
mean=	-0.55	-0.52	-0.29	-1.07	-6.64	-0.74
s.d.=	2.9	4.7	3.2	4.1	3.9	4.0

TABLE 6.50

DAS-Total Sub-Scale: Mean Couples Scores/Standard Deviations Per Condition Per Measurement Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	3.23	5.48	2.83	4.14	4.59	0.55
s.d.=	10.7	12.8	14.4	18.1	15.0	11.7
W/BOOK (n=28 couples)						
mean=	-2.50	-2.93	-3.54	-4.96	-3.08	-1.22
s.d.=	11.7	12.6	13.9	16.1	13.3	12.5
LECTURE (n=33 couples)						
mean=	-2.03	-1.21	-1.16	-1.06	-2.97	-0.67
s.d.=	10.7	12.3	15.4	12.1	11.6	14.6
DISCUSS. (n=31 Couples)						
mean=	-0.50	-0.21	-0.97	-3.13	-4.29	-2.74
s.d.=	10.5	11.5	14.9	12.8	13.9	12.9

interval in the Workbook-Only, Lecture and Discussion Conditions. As observed in each Table, the mean couple scores were generally small, indicating small mean differences between genders in each Condition at each measurement interval.

Table 6.51 presents results of statistical analysis investigating differences among mean couple change scores obtained per Condition across measurement intervals for each sub-scale of the DAS. As noted in Table 6.51, there were no significant main effects of Condition or time, nor were there significant Condition by time interaction effects observed on any of the sub-scales.

MRI

Table 6.52 presents mean couple raw scores and standard deviations obtained on the MRI in each Condition at each measurement interval.

As noted in Table 6.52, where all the mean couple scores were positive-signed, raw scores obtained by women clearly exceeded those obtained by men in every Condition and at every measurement interval. This suggested that women were more dissatisfied with their partners' role performance than were the men within each couple. Further, couple scores (which were notably larger than couple scores obtained on other measures) increased between Baseline and Month Six in every Condition.

In analysis, there was no significant main effect of Condition (d.f.=3, 111; F=.6; p=.62) or time (d.f.=3.8, 440; F=1.6; p=.18), nor was there a significant Condition by time interaction effect (d.f.=11.3, 440; F=.9; p=.5).

iii) Summary

There were no significant main effects of Condition or time, nor were there

TABLE 6.51

DAS: Results of Repeated Measures ANOVA Per Sub-Scale
(Mean Couple Change Scores)
(n = 123 couples)

SUBSCALE	CONDITION	TIME	CONDITION X TIME
AFFECTION			
df=	3,107	3.96; 416	11.8; 416
F=	0.50	0.22	0.91
p=	0.79	0.93	0.54
COHESION			
df=	3,107	3.4; 428	10.2; 428
F=	1.66	0.33	1.1
p=	0.20	0.82	0.32
CONSENSUS			
df=	3,107	3.9; 436	11.8; 436
F=	1.22	0.53	0.73
p=	0.30	0.71	0.72
SATISFACTION			
df=	3,107	3.8; 436	11.4; 436
F=	0.03	1.4	0.58
p=	1.1	0.24	0.86
TOTAL			
df=	3,107	3.9; 388	11.5; 388
F=	0.5	0.68	1.4
p=	0.77	0.6	0.33

TABLE 6.52

MRI: Mean Couple Scores/Standard Deviations Per Condition Per Measurment Interval (Month 1-6)
(n=123 couples)

CONDITION	B/LINE	MONTH ONE	MONTH TWO	MONTH THREE	MONTH FOUR	MONTH SIX
CONTROL (n=31 couples)						
mean=	4.0	2.97	3.00	4.00	3.97	5.23
s.d.=	6.7	7.6	6.8	8.7	6.6	6.1
W/BOOK (n=28 couples)						
mean=	4.75	4.14	5.50	3.68	5.56	4.96
s.d.=	8.6	8.14	8.6	7.4	6.8	7.8
LECTURE (n=33 couples)						
mean=	4.38	3.36	4.52	5.18	2.97	4.97
s.d.=	10.1	5.9	5.6	7.6	6.9	9.3
DISCUSS. (n=31 couples)						
mean=	3.52	7.42	5.58	6.13	4.93	6.48
s.d.=	11.0	12.0	10.0	10.9	11.6	12.1

significant Condition by time interaction effects observed in analysis of the mean couple scores obtained on any of the Relationship Well-Being Measures.

6. PLAN OF ANALYSIS: PART THREE

In Part Three, data obtained on the measures from the Relationship Well-Being domain (Communication Scale, Dyadic Adjustment Scale and Marital Role Inventory) were re-analysed in order to investigate the effects of individual psychological well-being (as defined by the HAD Scale) between genders and among Conditions across measurement intervals on these measures. The re-analysis was conducted per change scores.

The rationale for this re-analysis of data was based on one major consideration: individual parental psychological well-being (as identified in standard measures of anxiety and depression) can, arguably, affect relationship well-being (either positively or negatively). In this study, where a significant proportion of the sample of new parents demonstrated caseness levels of morbidity (anxiety and depression) on standard measures (see: Table 6.21), it appeared important to examine this potential effect through an appropriate analysis of covariance. As noted by Howell (1987): "...the analysis of covariance will primarily reduce the error term, but it will also, properly, remove any bias in the dependent variable means caused by chance group differences on the covariate" (p.539).

For each measure, Repeated Measures ANOVA was employed, following the same rationale discussed in Part One. Both normality and homogeneity of variance were examined for each measure and the results of appropriate homogeneity of variance tests are reported in Appendix Six. Additionally, in each analysis of covariance, the regression sum of squares (variability attributable to the covariate) is reported in Appendix Seven. Results of statistical analysis will be presented for each measure under two headings: under the first heading, the measures have been re-analysed using change score data obtained on the HAD Scale (Anxiety sub-scale) as a covariate.

Under the second heading, the measures have been re-analysed using change score data obtained on the HAD Scale (Depression sub-scale) as a covariate. Once again, the author is grateful to Professor A. Bowman (University of Glasgow) for his advice on this particular analysis.

7. STATISTICAL ANALYSIS

I) RELATIONSHIP WELL-BEING MEASURES STATISTICALLY ANALYSED PER REPEATED MEASURES ANOVA WITH HAD SCALE (ANXIETY SUB-SCALE) DATA AS COVARIATE

CS

Table 6.53 presents results of the statistical analysis conducted with change score data obtained on the CS per gender and Condition at each measurement interval. As noted in Table 6.53, there were no significant main effects of Condition or gender, nor was there a significant gender by Condition interaction effect. Further, there was no significant main effect of time, nor were there significant interaction effects of Condition by time, gender by time or Condition by gender by time.

DAS

Table 6.54 presents results of the statistical analysis conducted with change score data obtained on each sub-scale of the DAS per gender and Condition at each measurement interval. As noted in Table 6.54, there was a significant main effect of time for both the Affection and Consensus sub-scales only. (This finding repeats the findings observed in Table 6.29). However, there were no significant main effects of Condition or gender, nor were there significant interaction effects of Condition by gende, Condition by time, gender by time or Condition by gender by time observed on any sub-scale.

TABLE 6.53

CS: Results of Repeated Measures ANOVA (With HAD-Anxiety Sub-Scale Data as Covariate)
(n=246 participants)

MEASURE: CS	df	F	p
Gender	1, 219	1.6	0.199
Condition	3, 219	1.5	0.204
Condition X Gender	3, 219	1.0	0.367
Time	4,896	1.39	0.24
Condition X Time	12,896	0.70	0.76
Gender X Time	4,896	0.34	0.86
Condition X Gender X Time	12,896	1.07	0.48

TABLE 6.54

DAS: Results of Repeated Measures ANOVA Per Sub-Scale
(With HAD-Anxiety Sub-Scale Data as Covariate) (n =246 participants)

SUB-SCALE	df	F	p
AFFECTION:			
Gender	1, 214	0.38	0.54
Condition	3, 214	1.78	0.15
Condition X Gender	3, 214	0.30	0.83
Time	4,876	6.63	0.00*
Condition X Time	12,876	1.02	0.43
Gender X Time	4,876	0.20	0.94
Condition X Gender X Time	12,876	1.0	0.58
COHESION:			
Gender	1, 217	0.01	0.92
Condition	3, 217	0.19	0.91
Condition X Gender	3, 217	2.2	0.09
Time	4,888	1.51	1.10
Condition X Time	12,888	1.57	0.10
Gender X Time	4,888	0.30	1.0
Condition X Gender X Time	12,888	1.01	0.44
CONSENSUS:			
Gender	1, 218	0.11	0.74
Condition	3, 218	0.64	0.59
Condition X Gender	3, 218	0.97	0.41
Time	4,892	5.93	0.00*
Condition X Time	12,892	1.0	0.50
Gender X Time	4,892	1.0	0.43
Condition X Gender X Time	12,892	1.0	0.90
SATISFACTION:			
Gender	1, 218	1.4	0.25
Condition	3, 218	0.11	0.96
Condition X Gender	3, 218	0.00	1.0
Time	4,868	1.96	0.10
Condition X Time	12,868	1.14	0.33
Gender X Time	4,868	1.44	0.21
Condition X Gender X Time	12,868	0.40	1.0
TOTAL:			
Gender	1, 217	0.56	0.45
Condition	3, 217	0.24	0.87
Condition X Gender	3, 217	0.29	0.83
Time	4,848	2.13	0.10
Condition X Time	12,848	1.22	0.30
Gender X Time	4,848	0.44	0.80
Condition X Gender X Time	12,`848	0.80	0.70

Key: * p≥.05

TABLE 6. 55

MRI: Results of Repeated Measures ANOVA (With HAD-Anxiety Sub-Scale Data as Covariate) (n=246 participants)

MEASURE: MRI	df	F	p
Gender	1, 220	0.90	0.34
Condition	3, 220	1.6	0.17
Condition X Gender	3, 220	0.5	0.68
Time	4,900	19.5	0.00*
Condition X Time	12,900	1.35	0.20
Gender X Time	4,900	1.24	0.30
Condition X Gender X Time	12,900	1.01	0.44

Key: * p≥.05

MRI

Table 6.55 (p.317) presents results of the statistical analysis conducted with change score data obtained on the MRI per gender and Condition at each measurement interval. Again, there were no significant main effects of Condition or gender, nor was there a significant Condition by gender interaction effect observed. Further, although there was a significant main effect of time observed (as had previously been observed in Table 6.29), there were no significant interaction effects of Condition by time, gender by time or Condition by gender by time.

ii) RELATIONSHIP WELL-BEING MEASURES STATISTICALLY ANALYSED PER REPEATED MEASURES ANOVA WITH HAD SCALE (DEPRESSION SUB- SCALE) DATA AS COVARIATE

CS

Table 6.56 presents results of the statistical analysis conducted with change score data obtained on the CS per gender and Condition at each measurement interval. There were no significant main effects of Condition or gender, nor was there a significant Condition by gender interaction effect. Further, there was no significant main effect of time, nor were there significant Condition by time, gender by time or Condition by gender by time interaction effects observed.

DAS

Table 6.57 presents results of the statistical analysis conducted with change score data obtained on each sub-scale of the DAS per gender and Condition at each measurement interval. Again, and as noted in Table 6.57, there was a significant main effect of time for both the Affection and Consensus sub-scales only. (Once again, this finding repeats the findings observed in Table 6.29). However, there were no significant main effects of Condition or gender,

TABLE 6.56

CS: Results of Repeated Measures ANOVA (With HAD-Depression Sub-Scale Data as Covariate) (n=246 particiapnts)

MEASURE: CS	df	F	P
Gender	1, 219	2.7	0.10
Condition	1, 219	0.88	0.45
Condition X Gender	3, 219	0.53	0.66
Time	4,896	1.39	0.23
Condition X Time	12,896	0.70	0.85
Gender X Time	4,896	0.34	0.85
Condition X Gender X Time	12,896	1.07	0.41

TABLE 6.57

DAS: Results of Repeated Measures ANOVA Per Sub-Scale
(With HAD-Depression Sub-Scale Data as Covariate) (n=246 participants)

SUB-SCALE	df	F	p
AFFECTION:			
Gender	1, 214	1.4	0.25
Condition	3, 214	1.9	0.13
Condition X Gender	3, 214	0.35	0.78
Time	4,876	6.63	0.00*
Condition X Time	12,876	1.02	0.43
Gender X Time	4,876	0.20	1.0
Condition X Gender X Time	12,876	0.95	0.58
COHESION:			
Gender	1, 217	0.01	0.91
Condition	3, 217	0.44	0.72
Condition X Gender	3, 217	1.7	0.16
Time	4,888	1.51	0.28
Condition X Time	12,888	1.6	0.10
Gender X Time	4,888	0.30	1.0
Condition X Gender X Time	12,888	1.01	0.44
CONSENSUS:			
Gender	1, 218	0.01	0.93
Condition	3, 218	0.44	0.72
Condition X Gender	3, 218	0.70	0.55
Time	4;892	5.93	0.00*
Condition X Time	12;892	1.0	0.50
Gender X Time	4,892	1.0	0.43
Condition X Gender X Time	12,892	0.60	0.90
SATISFACTION:			
Gender	1, 218	1.7	0.19
Condition	3, 218	0.38	0.76
Condition X Gender	3, 218	0.09	0.97
Time	4,868	1.96	0.10
Condition X Time	12,868	1.14	0.33
Gender X Time	4,868	1.44	0.22
Condition X Gender X Time	12,868	0.40	1.07
TOTAL:			
Gender	3, 217	0.92	0.34
Condition	1, 217	0.17	0.92
Condition X Gender	1, 217	0.15	0.93
Time	4,848	2.13	0.10
Condition X Time	12,848	1.22	0.30
Gender X Time	4,848	0.44	0.80
Condition X Gender X Time	12,848	0.80	0.70

Key: * p≥.05

nor were there significant interaction effects of Condition by gender, Condition by time, gender by time or Condition by gender by time observed on any sub-scale.

MRI

Table 6.58 presents results of the statistical analysis conducted with change score data obtained on the MRI per gender and Condition at each measurement interval. Again, there were no significant main effects of Condition or gender, nor was there a significant Condition by gender interaction effect observed. Further, although there was a significant main effect of time observed (as had previously been observed in the earlier covariate analysis and in Table 6.29), there were no significant interaction effects of Condition by time, gender by time or Condition by gender by time.

ii) Summary

In re-analysis of the Relationship Well-Being Measures in which data obtained on measures of Psychological Well-Being were employed as covariates, there were significant main effects of time observed on the DAS (Affection and Cohesion sub-scales) and on the MRI. These findings, which had first been observed in the analysis in Part One, persisted in both sets of covariate analysis. However, no other significant results were observed in covariate analysis.

TABLE 6.58

MRI: Results of Repeated Measures ANOVA
(With HAD Depression Sub-Scale as Covariate)
(n=246 participants)

MEASURE: MRI	Df	F	P
Gender	1; 220	1.5	0.22
Condition	3; 220	1.7	0.16
Condition X Gender	3; 220	0.66	0.58
Time	4,900	19.50	0.00*
Condition X Time	12,900	1.35	0.20
Gender X Time	4,900	1.24	0.30
Condition X Gender X Time	12,900	1.01	0.43

Key: * $p \geq .05$

8. "HIGH SCORERS" VS. "LOW SCORERS"

i) Plan of Analysis

Significant differences among Conditions were not observed in the present study. However, in reviewing the data, it appeared important to attempt to gain some understanding of differences between couples who scored consistently high scores on measures of relationship functioning and those who did not. Similarly, it also appeared important to gain some understanding of differences between individual who obtained "caseness" scores and those who did not. These analyses are presented below.

ii) DAS

Both the Communciation Scale (CS) and the Dyadic Adjustment Scale (DAS) were initially considered for analysis. However, as the DAS is the more comprehensive measure of relationship functioning and further, as significant correlations between the CS and each sub-scale of the DAS were observed in the Pilot Study, the data presented here refer to the DAS only. In initial analysis, "high" scoring couples were defined as those couples who obtained couple scores in the upper quartile of all couple scores at two selected measurement intervals (Month Three and Month Six) on at least one sub-scale of the DAS. By this criterion, fifteen couples were identified: three couples were identified in the Control Condition and four couples were identified in each of the other Conditions.

In order to enlarge the available sample of "high scorers" and, thus, provide a more meaningful comparison, the range of scores obtained on the DAS were divided in thirds and "high scorers", defined as those couples who obtained couple scores in the upper third of all couple scores at three selected measurement intervals (Baseline, Month One and Month Three) on at least one sub-scale of the DAS were identified. By this criterion, thirty-five couples were identified: ten couples were identified in the Control Condition, nine couples

were identified in the Workbook-Only Condition and eight couples were identified in both the Lecture and Discussion Conditons.

As a means of considering these data in summary form, couples who demonstrated "high" scores (n=35) and those who demonstrated "low" scores (n=88) across measurement intervals on the DAS were compared on selected demographic variables. Table 6.59 presents these data.

TABLE 6.59

High Scores Couples (n=35) Compared To Low Score Couples (n=88): Age/ Marital Status/ Education/ Employment/Psychiatric History/Gestation

Measure	High Scorers (n=35 Couples)	Low Scorers (n=88 Couples)
Age (in years)		
Women		
Mean	27.4	27.0
s.d.	4.2	4.4
Men		
Mean	30.4	31.0
s.d.	5.9	5.2
Marital Status (in years)		
Married	29 couples (85%)	74 couples (84%)
Mean	2.0	2.4
s.d.	2.8	3.0
Living together	6 couples (15%)	14 couples (16%)
Mean	1.0	1.3
s.d.	0.9	2.3
Education (participants *)		
A Level/Highers	12 (17.1%)	34 (19.3%)
Prof. Qualification	17 (24.2%)	49 (27.8%)
HNC	6 (8.2%)	17 (9.6%)
HND	6 (8.7%)	10 (5.6%)
Degree	15 (22.0%)	48 (27.2%)
Other	14 (20.2%)	18 (10.5%)
Employment (participants)		
Employed	63 (90%)	160 (91%)
Unemployed	7 (10%)	16 (9%)
Psychiatric History (participants)		
Yes	2 (5%)	11 (6%)
No	68 (96%)	165 (94%)
Gestations (in wks.)	39.1 /s.d.=2	39.3 /s.d.=1.6

Key: I) * High Score sample n=70 participants
Low Score sample n=176 participants

As observed in Table 6.59, there were few differences of note between the samples. Although the distribution of highest educational qualifications appeared to differ very slightly between samples, the distribution within samples was very similar. On the basis of this comparsion, there did not appear to be major differences between the samples.

iii) EPDS

As a means of supplementing the first analysis, a further analysis, examining differences between individuals who obtained "caseness" scores and those who did not, was undertaken. As the prevalence of caseness scores was greater for the women in the sample than the men, the EPDS was chosen for this analysis. Women obtaining caseness at any measurement interval (n=36) were compared to women who did not obtain caseness scores (n=87) on selected demographic variables. Table 6.60 presents these data.

TABLE 6.60

EPND "Caseness" Women (n=36) Compared To EPND "Non-Caseness" Women (n=87): Age/ Marital Status/ Education/ Employment/Psychiatric History/Gestation

Measure	"Caseness" Women (n=36)	"Non-Caseness" Women (n=87)
Age (in years)		
Mean	30.6	28.9
s.d.	5.2	3.9
Marital Status		
Married	31 women (86%)	76 women (87%)
Mean	2.9	3.0
s.d.	2.8	4
Living together	5 women (14%)	11 women (13%)
Mean	2.7	2.7
s.d.	0.9	0.9
Education		
A Level/Highers	4 (11.1%)	10 (12.0%)
Prof. Qualification	9 (25.0%)	22 (25.2%)
HNC	9 (25.0%)	20 (25.2%)
HND	2 (5.6%)	8 (9.0%)
Degree	8 (22.2%)	21 (24.3%)
Other	4 (11.1%)	2 (4.3%)
Employment		
Employed	31 (86%)	75 (86%)
Unemployed	5 (14%)	12 (14%)
Psychiatric History		
Yes	4 (11%)	9 (10%)
No	32 (89%)	78 (90%)
Gestations (in wks.)	39.4/s.d.=2	39.4 /s.d.=1.6

As noted in Table 6.60, there were, once again, few differences between the samples. Women in the "caseness sample" appeared slightly older than women in the "non-caseness sample". Interestingly, the proportion of women with previous psychiatric histories was nearly identical in each sample.

In order to statistically investigate differences in age between the two samples, an Independent Samples t-test was conducted. (As the homogeneity of variance condition was violated, the Unequal Variances statistic is presented.) The analysis indicated that there were no significant differences in the ages of the women in the two samples (t-value=1.77; d.f.=1,52.29; p=.06).

iv) Summary

There were no significant demographic differences observed between samples of "high scoring" couples and "low scoring" couples (defined by scores on the DAS), nor were significant demographic differences observed between women obtaining caseness scores and those who did not on the EPDS.

9. DISCUSSION

It was hypothesised that new parents in the Lecture Condition would achieve significantly greater individual/couple adjustment during the transition to parenthood than new parents in other Conditions. This hypothesis was not supported nor were significant differences among any of the Conditions observed in statistical analysis in the Main Study. Therefore, the null hypothesis cannot be rejected.

Although there were no significant differences observed among Conditions, there were significant differences observed among the entire sample over time which support earlier findings reported in the transition to parenthood literature. Specifically, findings in the present study corroborate evidence suggesting that new parents experience a statistically significant decline in relationship satisfaction (as defined in this study by decreasing affectional expression) and

that maximal relationship dissatisfaction appears to occur within the first three post-natal months (Belsky et al, 1985; Ruble et al, 1988; Terry et al, 1991; Hackel and Ruble, 1992). Interestingly, although gender differences were observed on measures of individual psychological well-being in this study, relationship-based gender differences (with women experiencing significantly greater relationship dissatisfaction and greater dissatisfaction with partner's instrumental role performance than men) were not observed. Results obtained on specific measures will be considered within respective theoretical domains of the transition to parenthood. Following the discussion of these findings, a review of the study will be undertaken and, finally, future research options will be considered.

i) DEMOGRAPHICS

Although men participating in the Main Study were significantly older than participating women, the mean age of women in the study exactly matched that of the mean age for women in Britain having a first baby (OPCS, 1991). The majority of couples in the study were in Social Classes I and II, a finding also noted in studies by Shereshefsky and Yarrow (1974), Cowan and Cowan (1987) and Parr (unpublished manuscript) and, therefore, an unsurprising finding. Issues of social class will be considered later in this Discussion.

There did not appear to be significant differences between the samples of couples who completed the study and those who "dropped out" (although a smaller proportion of "drop-out" couples were married and a larger proportion of women in that sample were unemployed). This would appear to suggest some degree of equivalence between these samples. Interestingly, however, in both Pilot Study and the Main Study, a higher proportion of women in the "drop-out" sample had experienced previous abortions. Unfortunately, it is impossible to interpret this finding in the context of this study.

ii) PSYCHOLOGICAL WELL-BEING

In examining data obtained on measures drawn from the Psychological Well-Being domain, significant differences were observed between men and women on both the CCEI and HAD Scale (Anxiety sub-scale) at Baseline. In both instances, scores obtained by women exceeded those obtained by men (which indicated that women experienced higher levels of symptomatology).

On the CCEI, scores obtained by women exceeded those obtained by men on four of the six sub-scales: Anxiety, (which is specifically defined by Crown and Crisp, [1979] as "...free-floating anxiety...dread, indefinable terror, tension without a cause...[p.4]), Somatic Concomitants of Anxiety ("...breathlessness, headaches...digestive upsets, appetite loss, tiredness and exhaustion, sleep disturbance....[p.4]), Depression, ("...feeling sad, having to make a special effort to cope, the need to cry...[p.4]) and Obsessionality ("...excessive meticulousness, adherence to routine, punctuality, dislike of sudden change, need to control the environment, tendency to over-check" [p.4]). It must be noted, however, in interpreting these findings, that the CCEI was not specifically designed for an ante-natal population. Therefore, scores on this measure, derived from broad sub-scales and specific items noted above (breathlessness, exhaustion, etc.), may be inflated through the typical physical and psychological experience of women during the third trimester of pregnancy.

On the HAD Scale (Anxiety sub-scale), and in addition to the significant differences observed between genders at Baseline, both the Condition by time and gender by Condition by time interaction effects approached significance. While scores obtained by the entire sample of women exceeded those obtained by the entire sample of men, there was also a trend suggesting that scores obtained by women in the Workbook-Only Condition exceeded those obtained by women in other Conditions and that, in fact, women in this Condition obtained the highest scores in the sample. Unfortunately, there do not appear to be clear implications for this trend, particularly as it was not repeated on any other measure.

It must be noted that the significant differences between genders observed on the HAD Scale (Anxiety sub-scale) at Baseline reflect statistically significant differences in mean scores which were below "caseness". On this Scale, a "cut-off" raw score (11 or greater) separates those participants demonstrating caseness symptomatology from those who do not. Scores exceeding caseness indicate morbidity; scores below caseness do not reflect varying levels of emotional well-being but, rather, simply reflect "non-caseness". Therefore, the significant differences observed between genders, while statistically meaningful, are of considerably less clinical meaning or utility. It must also be reiterated that the HAD Scale has not been specifically validated for a sample of prospective and new parents.

Where psychological well-being has been compared between expectant mothers and fathers in previous studies, the levels of symptomatology exhibited by expectant mothers have exceeded that of expectant fathers (Dewi-Rees and Lutkins, 1971; Atkinson and Rickel, 1984; Raskin et al, 1990; Ballard et al, 1994). While the observed significant differences between genders demonstrated in this study on the CCEI and the HAD Scale may corroborate these earlier findings by suggesting "real" differences in psychological morbidity between expectant parents, this interpretation must be viewed with caution.

The statistically significant differences observed between genders at Baseline on the HAD Scale (Anxiety sub-scale) did not persist over subsequent measurement intervals. However, on both this sub-scale and the STAI (State Anxiety), levels of anxiety significantly decreased over time in the entire sample. On both sub-scales, the lowest levels of anxiety were observed between Months Three and Four (with, in both cases, slight non-significant increases observed at Month Six). This pattern of decreasing anxious symptomatology/state anxiety over the transition to parenthood, with noticeable decreases first apparent at three months post-natal, is entirely consistent with earlier studies (e.g. Fleming et al, 1990). It has been argued that decreasing anxiety, at least for women, may be indicative of improvements in physical health and in a growing sense of competence in baby-care (Fleming et al,

1990). It is also arguable (particularly in this sample where all babies were alive and healthy at delivery, where mothers did not experience major obstetrical emergencies and where infants remained healthy during the study period) that these decreases reflect, for both parents, a sense of relief in a safe delivery and continued well-being of the new infant.

Again, these statistically significant differences were observed among mean scores which did not reach caseness. When the prevalence of HAD Scale (Anxiety sub-scale) caseness was compared between men and women, the prevalence of caseness demonstrated by women exceeded that demonstrated by men at Baseline and at each subsequent measurement interval. Again, this finding is consistent with earlier studies (Dewi-Rees and Lutkins, 1971; Atkinson and Rickel, 1984; Raskin et al, 1990; Ballard et al, 1994).

On both the HAD Scale (Depression sub-scale) and the EPDS, levels of depressive symptomatology significantly decreased across measurement intervals. In this study, 5.6% of the men demonstrated caseness on the HAD Scale (Depression sub-scale) across measurement intervals (excluding Baseline where none of the men obtained a caseness score). Previous studies have reported caseness prevalence among men during the post-natal period ranging from 3.3% (Deater-Deckard et al, 1998) to 41% (Raskin et al, 1990). At least part of this wide variability may be explained by the measures employed among studies: the former study employed the EPDS (Cox et al, 1987) and the latter study employed the Centre for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977). Further, in each study, the questionnaires were completed, at one measurement interval only, at approximately eight weeks after the births. In the current study, five men demonstrated caseness in that time period, while only 2 men demonstrated caseness across the final two measurement intervals. A higher prevalence of caseness appears to occur in the early post-natal period, and measurement undertaken during this interval may, depending upon the measure employed, reflect this observation (as in the study by Raskin et al, 1990). In studies where a more rigorous diagnostic procedure has been employed (Ballard et al, 1994), a caseness prevalence of 7.9% for depression among men was reported at six

weeks post-natal, followed by an prevalence of 5.6% at six months post-partum, which appears more consistent with the findings reported in the current study. Again, the lowest levels (non-caseness mean scores) of depressive symptomatology demonstrated by the men in the sample occurred at Months Three and Four.

Mean scores on the EPDS (employed with women in the sample only) significantly decreased over time, with the lowest scores observed at Months Three and Four (a finding frequently observed in earlier studies [Cox et al, 1982; Cutrona, 1984; O'Hara et al, 1984; Fleming et al, 1990]). (It is interesting to note that although the validation study on the EPDS began within the first three post-natal months, there is no specific validation information on this measure for the first post-natal month [Cox et al, 1987]). In considering depressive symptomatology among women in the sample, it is important to remember that caseness scores on the EPDS reflect the prevalence of dysphoria. The EPDS is not a diagnostic tool. As noted by Green (1998), "...a high EPDS score does not mean that a woman is clinically depressed..." (p.145). Twenty-nine per-cent of women in the sample demonstrated caseness at a minimum of one measurement interval and a lower 15.4% demonstrated caseness at a minimum of two consecutive measurement intervals. Both Dewi-Rees (1971) and Atkinson and Rickel (1984) reported a caseness prevalence of 30% among their samples (in which the BDI was employed and where measurement was undertaken at one measurement interval only in the early post-natal period). In studies with more rigorous diagnostic criteria (Paykel, 1980; Watson et al, 1984; O'Hara et al, 1993; Ballard et al, 1994), a prevalence of approximately 10-20% has been reported. Clearly, in studies like the present study and the studies by Dewi-Rees (1971) and Atkinson and Rickel (1984), where symptoms of dysphoria or depression are measured (as opposed to studies like those of Paykel et al, [1980]; Watson et al, [1984]; O'Hara et al, [1993] and Ballard et al [1994], where syndromes of depression are diagnosed) a higher prevalence of caseness is reported.

Finally, in a very small proportion of cases (1.6%), the male partner obtained HAD Scale (Depression sub-scale) caseness at the same two consecutive

measurement points as the female partner obtained EPDS caseness scores. This compares to 4.7% (n=86 couples) of couples demonstrating dysphoria concurrently during the post-natal period in a study by Raskin et al (1990), However, in that study, as noted earlier, measurement was undertaken during the early post-natal period at one time point only, when the prevalence of caseness for both men and women may have been higher.

It is interesting to note that although a proportion of women in the present study (7.3%) obtained caseness scores on both the EPDS and the HAD Scale (Anxiety sub-scale), caseness of dysphoria was more prevalent among women than caseness of anxiety. This trend was reversed among the men where caseness of anxiety was more prevalent than caseness of depressive symptomatology (as defined by the HAD Scale [Depression sub-scale]). The differing trajectories observed between men and women during the transition to parenthood have been frequently commented upon with respect to issues like relationship satisfaction (LaRossa and LaRossa, 1981; Belsky et al, 1985; Belksy et al, 1986). However, there has been little attention paid in previous studies to differences in the prevalence of depressive and anxious caseness between genders.

It is conceivable that new fathers, in the early post-natal period, experience greater feelings of "threat" (associated with anxiety) than "loss" (associated with depression). Among men, feelings of threat may be associated with possible fears regarding the well-being of their partners during labour and delivery and the well-being of the new infant and may be exacerbated by increasing concerns regarding the financial security for the new family unit, particularly where a working mother is unlikely to return to work for several months following birth (Sanchez and Thomson, 1997). However, the lifestyle enjoyed by the new father (including an immediate return to work following birth and potentially small disruptions to usual social activities) is unlikely to significantly change and, therefore, birth is not necessarily associated with loss of either previously enjoyed status or pursuits. As was demonstrated in the present study, however, for the new mother, feelings of loss, which may reflect both the loss of employment status (at least temporarily) and loss of usual pursuits, and

which may be exacerbated by physical discomfort and fatigue, appear to be the more prevalent experience (Nicolson, 1998).

iii) RELATIONSHIP WELL-BEING

In considering results obtained on measures drawn from the Relationship Well-Being domain, striking findings were observed among the entire sample on the DAS (Affection sub-scale and Consensus sub-scale). On the Affection sub-scale, affectional expression decreased (when compared to Baseline) over the subsequent measurement intervals, reaching its highest levels at Months Three and Four. At Month Six, there was a significant decrease observed. This finding has been frequently reported in previous studies with couples (Belsky et al, 1983; Belsky et al, 1985; Terry et al, 1991) and with new mothers only (Ruble et al, 1988; Fleming et al, 1990). This finding is particularly interesting when compared with the results obtained on the Consensus sub-scale: consensus increased at each measurement interval, reaching a peak at Months Three and Four. It appears, then, that while affectional expression decreased over time and most significantly at Month Six, consensus increased over time (and, in fact, only demonstrated a non-significant decrease at Month Six). These findings have been explained by previous authors (Belsky et al, 1983; Belsky et al, 1985) as indicating a fundamental shift in the character of parental relationships during the transition to parenthood: a shift from a "romantic" relationship to a partnership.

In contrast to other studies with couples (Belsky et al, 1983; Belsky et al, 1985; Terry et al, 1991) in which the DAS was employed, significant gender differences in affectional expression were not observed over time in this study. In the earlier studies, decreases in affectional expression were significantly greater among new mothers and were attributed to perceptions of inequitable divisions of household labour, with new mothers perceiving increased responsibility for both household and child care during the post-natal period. In the present study, although gender differences were observed on the MRI at Baseline, with women reporting greater dissatisfaction with their partners'

instrumental role performance than men, this gender difference did not persist over time. However, for both genders, a significant decrease in satisfaction with partners' role performance was observed over subsequent measurement intervals. In the present study, then, it is tempting to suggest that while a "partnership" was being forged, dissatisfactions among both partners regarding instrumental roles persisted.

The differences observed between this study and previous studies may reflect changing social trends. Arguably, new fathers now engage in more domestic tasks (including baby care) during the transition to parenthood than they did in previous generations. There is, for example, evidence suggesting that increasing child-centredness among contemporary fathers has led to their greater involvement in household tasks (Coltrane, 1989). "Role-overload" during this time, once the sole province of new mothers, may currently be more evenly divided, with both partners experiencing relationship dissatisfactions (expressed as decreases in affectional expression) as a result. However, if this argument is valid, it must also follow that any increases in relationship consensus exist outwith consensus on the division of labour

Previous studies have noted that maximal relationship dissatisfaction occurs within the first three post-natal months (Belsky et al, 1985; Ruble et al, 1988; Terry et al, 1991; Hackel and Ruble, 1992). In the present study, and in keeping with this finding, scores obtained on the DAS for affectional expression and consensus were higher at Month Three and Four than at Month One andTwo. However, it is interesting to note that affectional expression significantly decreased at Month Six and that, in fact, the lowest score obtained on the sub-scale was obtained at that time. In studies where measurement has extended to nine months post-natal (Belsky et al, 1985), improvements in affectional expression have been observed at nine months, relative to measurement at six months. It may be that early improvements in affectional expression at three or four months post-natal are mitigated between six and nine months post-natal by the on-going effort associated with infant care and by increased awareness of the reality of the life-long commitment involved in parenting.

iv) PREGANCY WELL-BEING

Results obtained on the MAMA (one of the two measures in the Pregnancy Well-Being domain) essentially support, in a less differentiated way and for the women in the sample only, results obtained on the DAS. Although there were no significant differences among Conditions on the six sub-scales of the MAMA at Baseline, on two of the sub-scales, the results approached significance. On both the Somatic Symptoms and the Marital Relationships sub-scales, the highest scores were obtained by women in the Lecture Condition, suggesting that these women experienced the greatest levels of somatic discomfort and marital relationship dissatisfaction in the sample. The lowest scores, and thus, the least somatic discomfort, was obtained by women in the Workbook-Only Condition, while the greatest relationship satisfaction in the sample was experienced by women in the Control Condition. Again, there do not appear to be clear implications for these trends, particularly as they were not repeated on any other measure.

In examining differences obtained among the whole sample on the sub-scales of the MAMA between Baseline and Month Six, the significantly decreased scores obtained at Month Six on the Somatic Symptoms and Attitudes to Pregnancy/Baby sub-scales clearly indicate predictable decreases in physical discomfort during the later post-natal period and, possibly, increasingly positive attitudes toward the babies and experience of pregnancy. These findings are consistent with those reported by Windridge and Berryman (1996).

Interestingly, the women in the sample reported increased dissatisfaction with their marital relationships at Month Six and an over-all dissatisfaction (when the Total Score of the MAMA was considered). These perceptions have been reviewed with reference to the entire sample with the slightly more "fine-grained" data available with the DAS. However it is interesting to note that there were no significant differences from Baseline to Month Six on either the Body Image or Attitudes to Sex sub-scales of the MAMA. It is possible, then, that neither of these factors contributed to the overall dissatisfactions observed among women in the sample and may provide further evidence for the

suggestion that relationship dissatisfactions during the transition to parenthood are primarily associated with increased instrumental role demands.

v). REVIEWING THE STUDY

In the present study, the null hypothesis could not be rejected. It is important to attempt to understand reasons for this finding. In this process, issues in sampling and other aspects of methodology will be considered, and, importantly, issues associated with the "context" (Parentcraft Classes) within which this study was based will be discussed.

i) Sampling

There is the possibility that the participants in the present study were, in some way, different from participants in other intervention studies, particularly those intervention studies where significant findings have been reported. (It must, however, be remembered that even where significant intervention effects have been observed in other studies [e.g Gordon and Gordon, 1960; Shereshefsky and Yarrow, 1974;] significant methodological difficulties were present, as was noted in Chapter Three.)

To investigate this possibility, basic demographic information (age, length of marriage or co-habitation and social class) was compared for participants in the current study with participants in three intervention studies with couples where significant efects of the experimental intervention were reported and where this information was available: Sheresfesky and Yarrow (1974), Cowan and Cowan (1987) and Parr (unpublished manuscript). This comparative information is presented in Table 6.61.

As noted in Table 6.61, there appeared to be few differences on selected participant demographic variables among studies and, in fact, the participant samples appeared to be remarkably similar. The most noticeable difference

was that for age of both women and men participants in the study by Shereshefsky and Yarrow (1974): participants in this sample were younger than participants in the other samples. However, it must be remembered that this study was conducted twenty-four years ago when new parents were, generally, younger than new parents today (OPCS, 1993). On the basis of the data presented here, there did not appear to be compelling reasons to believe that the current participants significantly differed from those in other comparable studies.

TABLE 6.61

Comparison of Participant Demographics: Current Study with Three Comparable Studies (Shereshefsky and Yarrow,1974; Cowan and Cowan,1987; Parr, unpublished manuscript)

	Current Study (n=123 couples)	Shereshefsky and Yarrow (1974) (n=60 couples)	Cowan and Cowan (1987) (n=95 couples)	Parr (u.m.) (n=106 couples)
Age: (mean years)				
Women	29.4	23.5	29	29
Men	31.3	27.1	30.2	31
Length: (mean years)				
Married	4	n/a	4	5
Co-habiting	2	n/a	n/a	n/a
Social Class:	Classes I/II*	Middle	Middle	Classes I/II*

KEY: i) * Parr reported that 68% of the sample were in Social Classes I and II. In the current study, 72.6% of the sample were in Social Classes I and II (See Table 6.6).

Although there did not appear to be significant demographic differences among participants in the current sample and those in other samples, it must be remembered that participants in all these studies differed from non-participant first-time parents: they had consented to take part in research studies where other parents, obviously, had not. In the current study, participants were doubly self-selected: first, they agreed to attend Parentcraft Classes (where

approximately 40% of those invited to attend did not); secondly, they agreed to enter the research study (where approximately 60% of those attending Parentcraft Classes did not). It can be assumed that couples entering the study were highly motivated to acquire information regarding parenthood. These couples were randomly allocated to experimental Conditions, and, therefore, the participants in each Condition can be assumed to be equivalent. However, it is conceivable that the information provided these highly motivated couples was information with which they were familiar and that a "ceiling effect" was evident. The same intervention applied with less motivated (and thus, less informed) couples might have resulted in different findings.

In the studies by Shereshefsky and Yarrow (1974), Cowan and Cowan (1988) and Parr (unpublished manuscript), in which efficacy for the experimental interventions has been reported, the participants were, arguably, as motivated and informed as the participants in the current study. However, and this is an issue which will be dealt with in detail later in this Discussion, the intervention provided in each of the other studies was longer than that provided here and it is the length of intervention, particularly with an informed, middle class sample, that may have been pivotal to the reported success.

b) RESEARCH METHODOLOGY

i) Researcher Bias

There is a possibility that the research methods employed in the current study were, in some way, biased. For example, it is, at least theoretically, possible that the Lecture and Discussion interventions were insufficiently differentiated to produce any significant difference among the sample. This possibility appears highly unlikely, however, as there is evidence, from two sources of external validation to suggest that the interventions were significantly distinct. In Chapter Five, data was presented indicating that external raters were able to correctly differentiate (with 100% concordance) video-recorded Lecture and Discussion interventions and in Chapter Six, external raters indicated that

personal qualities demonstrated by the researcher were consistent in these Conditions.

ii) Length/Timing of Intervention

It is possible that the Lecture/Discussion interventions were too brief to have demonstrable effects. In the current study, these interventions were conducted over two two-hour sessions. The decision regarding the length of intervention in the current study was based on both theoretical and pragmatic considerations. More precisely, at least in terms of theoretical considerations, the decision regarding the length of intervention was based on an absence of any firm indication for good practice. As noted in Chapter Four, Hosman (1994) has argued that there is, at the present time, little reliable evidence on which to base a decision regarding optimal intervention length in mental health promotion initiatives.

One of the purposes of the present study was to examine the utility of enlarging the current Parentcraft Classes curriculum in such a way as to incorporate appropriate mental health promotion for prospective parents. Length (number of sessions) of intervention was constrained, therefore, by attempting to locate the intervention within existing provision. The intention was to compliment existing NHS ante-natal education services rather than replace existing services with an alternative approach. In consultation with Community Midwives and Community Physiotherapists, providers of ante-natal education in the local setting, it was agreed that there was a limit to the number of classes prospective parents were likely to attend, irrespective of any potential benefit. Given the length of the existing programme (five classes over five consecutive weeks), the positive trend suggested by Gordon and Gordon (1960) for brief intervention, and the absence of explicit indications for optimal programme length (Hosman, 1994), a decision to enlarge the existing curriculum by two additional ante-natal sessions was reached.

In the study by Gordon and Gordon (1960), as noted above, exactly the same length of intervention was employed (and the content and format appear to have been comparable to that provided in the Lecture Condition). Significant results in favour of the intervention were reported by the authors. (However, as noted in Chapter Three, findings in this study were compromised by an absence of standardised outcome criteria.) The length of intervention employed in all the other studies described in Chapter Three exceeded two sessions and, unlike the present study, sessions were frequently conducted both in the ante-natal and post-natal period (Shereshefsky and Yarrow, 1974; Clulow, 1982; Cowan and Cowan, 1987; Elliott et al, 1988; Parr, unpublished manuscript). It is possible, therefore, that in order to achieve significant effects, a longer period of intervention is required and, further, that intervention may have to be conducted in both the ante-natal and post-natal periods.

In the present study, participants in both researcher-led intervention Conditions (Lecture and Discussion Conditions) may have required a longer period of time to either absorb the content of the lecture or benefit from the opportunity to share common experiences with peers. This hypothesis appears particularly likely when the content of the Lecture Condition is considered. In this Condition, both specific couple communication issues and more general issues in mental health during the transition to parenthood were raised. This amount of information may have been too ambitious for the available time. In the study by Renick et al, (1992), for example, couple communication, as a single issue, was developed as an intervention with participants over six two/two and one-half hour sessions.

Further, in Chapter Three, the theoretical importance of pre-natal and post-natal intervention in post-natal depression prevention (as suggested in studies by Elliott et al, 1988, Reid, et al, unpublished manuscript and Brugha, unpublished manuscript) was noted. It may be that a "critical mass" of findings is now evolving indicating that both prevention and promotion interventions require protocols which include pre-natal and post-natal components (Cowan and Cowan, 1987; Parr, unpublished manuscript).

iii) Additional Considerations

There are other possible explanations for the equivalence of Conditions observed in this study. Arguably, participants in any study are affected by involvement in that study whether or not they are assigned to an intervention condition. In the present study, when all participants (who were, it must be remembered, relatively well-educated) were asked to complete batteries of questionnaires in the post-natal period which explicitly examined parameters of psychological and relationship functioning, it is arguable that the issues raised by the questionnaires had similar effects on each Condition which served to confound the specific effects of the intervention. Similarly, as all members of the Primary Care Team were aware of participants' involvement in the study (although not aware of Condition assignment) and were equally aware of available access to a Clinical Psychologist, it is possible that the provision of routine care was in some way altered, leading to improved or more responsive service for every participating couple.

The independent variable in the present study was, essentially, information provision. In the Discussion Condition, participants established their own agenda and, given the high salience of an arguably limited number of topic areas for prospective parents, there was, no doubt, some degree of overlapping information shared between this Condition and the Lecture Condition. It is, of course, also possible that participants in the Control Condition obtained copies of the Workbook from friends in the Workbook-Only or Lecture Conditions. Of importance, also, was the potentially greater social support element available in the Discussion Condition, which as an additional vehicle for learning, may have served to obviate the strictly "educational" advantage afforded those in the Lecture Condition (Elliott, 1988).

It is also important to acknowledge that research in the "real world" does not exist in a social vacuum. The Main Study was conducted over a two-year period and the differential effects of events occurring outside the research orbit during that period may have produced differing effects on the sample. For example, the researcher (MKR) was featured, during the study period, in a

locally well-known and popular television programme (Scottish Women) on which the topic area was post-natal depression. Arguably, the researcher may have been perceived differently by participants before or after that event. The famous interview with Diana, Princess of Wales, in which she openly discussed her own post-natal experiences may also have served to create differential attitudes to mental health during the post-natal period among participants involved in the study before or after transmission of that interview.

vi) PARENTCRAFT CLASSES AND THE PSYCHO-SOCIAL INTERVENTION TO PARENTHOOD

Recent surveys in ante-natal education have suggested that "...midwives are primarily addressing maternity unit policies underpinning antenatal care, childbirth and the basic skills for childcare ..." (Royal College of Midwives, 1998, p.6) in Parentcraft Classes. There has been an attempt to broaden this focus and it has been recommended that midwives recognise and discuss important psycho-social determinants in the transition to parenthood with prospective parents. The current study attempted to provide a model for the inclusion of these factors within traditional NHS programme delivery. In the absence of empirical support for the intervention employed in the current study, however, it appears necessary to reconsider this model.

First, it may not be possible to meet multiple demands in ante-natal education at the same time. If the relatively short intervention employed in the current study is of insufficient length to demonstrate effectiveness but is as lengthy (when added to the existing curriculum) as prospective parents can be expected to attend, this suggests that it may not be possible to provide both necessary traditional ante-natal education and additional components within a suitable time-frame for prospective parents. Rather, it may be necessary to consider separating these elements, with the more traditional components provided in the ante-natal period, with perhaps introductory psycho-social issues raised at that time, and more comprehensive information regarding the

transition to parenthood developed in the post-natal period. By providing appropriate intervention during the early post-natal period, when relationship dissatisfaction is, potentially, most prevalent, the needs of new parents may be more effectively met. This suggestion explicitly acknowledges the important role played by Community Midwives in the post-natal period (Royal College of Midwives, 1998) and, further, acknowledges current activity by Health Visitors in, for example, the prevention and detection of post-natal depression (Holden et al, 1989; Gerrard et al, 1993; Holden, 1994; Elliott, 1994; Seeley et al, 1996).

If it is not possible to meet multiple demands in ante-natal education at the same time, it may also be impossible to meet these demands within the same setting. It is obvious that new parents require a considerable degree of "clinical" information regarding the birth process and obstetrical procedures prior to births, especially when birth takes place in the hospital (as the great majority of births do). "Psychological" information may not be usefully presented within the same context. It is interesting to note that, apart from the study by Gordon and Gordon (1960) and the present study, other intervention studies have been conducted in relative isolation from traditional ante-natal education provision. In the other studies (most noticeably Shereshefsky and Yarrow, 1974; Cowan and Cowan, 1987; and Parr, unpublished manuscript) where evidence of effectiveness for the experimental intervention has been presented, there was no explicit attempt made either to link existing provision and experimental intervention or to incorporate experimental intervention within existing provision. In fact, the study by Parr (unpublished manuscript) was exclusively based in the voluntary sector. This may strengthen the earlier suggestion that "clinical" and "psychological" components in parenthood education require separate educational settings and, further, may indicate that increased collaboration between the NHS and the voluntary sector in parenting education is a viable alternative for the future.

Finally, in considering the theoretical importance of post-natal intervention, it is possible that prospective first-time parents have considerable difficulty in thinking beyond the birth, especially in late pregnancy. This might suggest that intervention, exclusively based in the ante-natal period but focused on changes

in the post-natal period, is difficult for prospective parents to seriously engage with. If this hypothesis is correct, there is an obvious necessity to consider post-natal intervention. Additionally, intervention which occurred in late pregnancy only, as in the present study, may have allowed too little time for the appropriate intellectual and emotional processing of information before the births.

vii) QUALITATIVE ANALYSIS IN QUANTITATIVE STUDIES

In comparing differences among Conditions in the present study, quantitative analysis was essential. The study was entirely based on standard questionnaires, all of which were "forced choice". It is conceivable that with additional "open" questionnaires (perhaps specifically devised for the study) and/or the inclusion of interview data and the subsequent use of additional qualitative analysis, a more individualised sense of differences among participating couples might have been obtained (Sherrard, 1998; Cooper and Stenson, 1998). This approach was adopted in the study by Brugha et al (unpublished manuscript) where both qualitative and quantitative research methods were employed. In the present study, data based on quantitative analysis would have been particularly useful in planning future research. Unfortunately, it was not possible within the constraints of current funding, to include both methodologies in this study.

viii) FUTURE RESEARCH

There are a number of possibilities for future research raised by this study. There is a possibility that "ceiling effects" contributed to the findings in this study, and it would be of value, therefore, to attempt to replicate this study with a different sample. It might, for example, be possible to consider the development of some kind of "pre-test" that would differentiate knowledge bases for participants. Those participants obtaining lower range scores on the pre-test could then be offered intervention within a research protocol.

Similarly, the identification of women vulnerable to post-natal depression was incorporated in two prevention studies (Elliott et al, 1988; Brugha et al, unpublished manuscript). This approach may be of value in broader psycho-social interventions in the transition to parenthood. Through recognising couples at significant risk of relationship disequilibrium, resources might be more effectively targeted in future research. This also suggests a requirement for further research aimed at investigating risk factors for relationship disequilibrium during the transition to parenthood.

A further possibility would be to reconsider the current protocol and to lengthen it (in terms of number of sessions and in terms of the placement of these session with regard to birth) to develop an ante-natal intervention with further post-natal intervention and follow-up. Through lengthening the intervention, it would be possible to allow for more interactive learning which could utilise a range of role-play skills which might be of particular value in the development of communication skills among couples. It would also be possible to assign "homework" between sessions, based on material presented during sessions (as is often used in treatment strategies [White, 1998]) and to utilise other kinds of behavioural methods in developing a training protocol.

In the present study, it is conceivable that the content of the interventions was overly-ambitious. Future research might benefit from a tailoring of the current protocol, particularly the protocol employed in the Lecture Condition. It is possible, for example, that a clearer and more specific focus on communication (as opposed to the current model which also included information on psycho-social transitions, role-change during the transition to parenthood and broader issues on mental health) might have demonstrated greater effectiveness.

VIX) SUMMARY

There were no significant differences observed among Conditions in the current study and the null hypothesis could not be rejected. However, there were differences over time among the entire sample which corroborated previous findings in the transition to parenthood literature. Interestingly, an apparently "robust" finding reported in the literature, gender differences in relationship satisfaction and satisfaction with partner's instrumental role performance during the transition to parenthood, was not observed in this study. Further, the study was of particular value in raising issues regarding the possible incorporation of broader psycho-social issues in the traditional ante-natal education curriculum. In the final Chapter of this Thesis, these issues will be considered in more detail.

CHAPTER SEVEN: EPILOGUE

1. INTRODUCTION

As stated by Howells (1987), "...the concept of the null hypothesis plays a crucial role in the testing of hypotheses" (p.65). Fisher (1935), in a philosophical argument known as "the method of contradiction", suggested that, while it was never possible to prove a hypothesis true, it was sometimes possible to prove one false. However, Fisher (1935) also argued that a non-significant result was an inconclusive result that should lead only to a suspension of judgement until such time as further data are available. This position was contested by Neyman and Pearson (1933), who assumed a somewhat more pragmatic view. They argued that one either accepts or rejects the null hypothesis and that by accepting the null hypothesis, "...we do not mean that we take it to be proven true. We simply mean that we act as if it is true, at least until we have more adequate data" (Howells, 1987, p.67). In theory, then, and from Fisher's perspective, findings in the present study must lead, in the absence of a conclusive result, to further investigation; Neyman and Pearson, alternately, would argue that the current findings (provided the null hypothesis has not been falsely accepted) are sufficient. Howells (1987) states that present statistical practice contains elements of both perspectives, and the response to the findings in this study will reflect that duality.

This study has raised several substantive issues for both transition to parenthood and promotion of mental health theory and practice-based issues for Midwifery and Clinical Psychology. In an attempt to intervene with first-time parents during the transition to parenthood, this study quantitatively described that experience through standard measures of psychological and relationship well-being. While corroborating some earlier findings in the literature, the present results raise a number of further issues for consideration. For example, gender differences in relationship satisfaction and satisfaction with the distribution of instrumental roles, a fundamental and pervasive finding in earlier studies, were not replicated here. It

has been argued that this finding reflects social changes in parenthood in contemporary society. Clearly, there are also important implications from this study for discourse on the promotion of mental health with specific reference to the role of mental health promotion in the context of normative life-events. Further, the most appropriate timing for "psychological" preparation for first-time parenthood, is, on the basis of this study, open for discussion by both Midwifes and Clinical Psychologists. These themes, which were introduced in Chapter Six, will be further developed in this Chapter, following which practice-based implications for Midwifery and Clinical Psychology in the current NHS will be offered.

II. THE TRANSITION TO PARENTHOOD REVISITED

In the transition to parenthood literature, the primary focus of study is usually the parental relationship (Belsky et al, 1985[a]; Terry et al, 1991). As a result, measures of individual parental psychological well-being are not generally included. Studies in field that have considered psychological well-being (usually defined as the presence or absence of symptoms of anxiety and/or depression) have usually focussed exclusively on new mothers (Ruble et al, 1988; Fleming et al, 1990). The inclusion of measures of both relationship well-being and individual parental psychological well-being within a study which includes both parents is, interestingly, relatively rare. One of the strengths of the present study has been the inclusion of measures from both domains.

Data obtained on psychological well-being measures in the present study suggested that women experienced higher levels of anxious symptomatology than men (at least at Baseline), and that women experienced a higher prevalence of both anxious and dysphoric "caseness" than did men throughout the transition to parenthood. These results supported those obtained by Raskin et al (1990) and Ballard et al (1994) in studies in which the foci of investigation were either patterns

of depressive symptoms among expectant and new parents (Raskin et al, 1990) or the prevalence of post-natal psychiatric morbidity among new parents (Ballard et al, 1994). It appears that gender differences in caseness morbidity (with women demonstrating greater caseness than men) during the transition to parenthood are a consistent finding. One of the findings of particular interest in the present study, is that there was an apparent absence of any effect of these differences on measures of relationship well-being.

On measures of relationship well-being, in the present study, decreasing affectional expression and increasing consensus were observed across measurement intervals and explained with reference to a fundamental shift in the character of parental relationships (romance-based to partnership-based) during the transition to parenthood (Belsky et al, 1983; Belsky et al, 1985[a]). However, this pattern of change was observed for both genders and there were no significant between-gender differences noted. Concurrently, both genders reported growing dissatisfaction with their partners' instrumental role performance. Apart from significant differences observed between genders at Baseline (with women demonstrating greater dissatisfaction with partners' role performance than men), there were no significant between-gender differences observed over subsequent measurement intervals. It appears that while parental relationships were undergoing fundamental change, dissatisfactions with instrumental role performance persisted for both partners equally, findings unaffected by apparent gender differences in caseness morbidity.

In earlier studies, dissatisfaction with instrumental role performance has been observed to a significantly greater degree among women than men and has been used to explain the greater relationship dissatisfaction experienced by women during the transition to parenthood (Belsky et al, 1985[a]; Belsky et al, 1988; Terry et al, 1991). These consistent gender differences have been accepted as reliable findings. However, in the present study, these gender differences were not observed and it is arguable, therefore, that issues in the division of labour

adversely affected relationship satisfaction for both new mothers and new fathers.

This finding leads to an interesting hypothesis. Is it possible that the "myth of the new man" (Nicolson, 1998), particularly among a largely educated middle-class sample as was represented in the present study is, in fact, not a myth but a new social reality? If so, however (and highly ironically), it may be that the "caring, sharing" new man does not help reduce relationship dissatisfactions for the new mother by increasing his proportion of household tasks (as might have been hoped), but that through increasingly equitable instrumental role performance, the "new man" simply becomes equally dissatisfied as the new mother with the unremitting multiple demands of infant care, household care, and occupational responsibility during the early transition to parenthood. This hypothesis is certainly worthy of further empirical investigation.

There are few academic descriptions of the "new man" (Badinter and Davis, 1995; Hondagneu-Sotelo and Messner, 1997). "He" appears to have entered the arena of gender discourse through the media rather than through academic analyses (Brooker, 1994; Shields and Hamilton, 1994; Jardine, 1998). However, multiple social forces including gender politics, changing patterns of employment with respect to the genders, changes in legislation regarding discrimination on the basis of gender and with regard to family law have, it appears, led to changing social constructions of masculine identity (Badinter and Davis, 1995). Changes in the social construction of masculine identity have implications for contemporary family life and, obviously, for the transition to parenthood.

Parenthood and the transition to parenthood are not "fixed" objective realities but changeable social constructs which will reflect changing patterns of gender identity and a diversity of wider social phenomena (Brannen and Moss, 1991; Cowan and Cowan, 1998). The experiences of new parents reported by LeMasters (1957), in the seminal study on the transition to parenthood, were notable for their explicit recognition of parental crisis during the transition to parenthood in post-war

American society. Arguably, the impact of the findings reported in that study resulted, at least in part, from the contradiction they posed to the prevailing social understandings and media representations of birth and early parenting. In the intervening forty years, social constructions of family life have changed further. Those "robust" findings reported in the transition to parenthood literature, even as recently as the mid-1980's, may only be credible in the specific society contemporaneous to their investigation. Interestingly, in more recent studies (Ruble et al, 1988; Levy-Shiff, 1994), marital satisfaction in the post-natal period among women was specifically related to increasing paternal involvement in childcare (as opposed to equitable divisions of a broader range of instrumental roles), a finding which may reflect changing expectations between men and women of appropriate tasks for each partner in modern families.

Cowan and Cowan (1998) have argued that parents at the end of the twentieth century are "new pioneers" "...they are creating a new version of family life in an era of greater challenges and fewer supports, increased and confusing choices about work and family arrangements, ambiguities about men's and women's proper roles and demanding expectations of themselves to be both knowlegeable and nurturing partners and parents " (p.172). This observation has clear implications for future transition to parenthood studies: parenthood and the transition to parenthood must be understood with reference to the prevailing social environment. This implication underlines the importance of multi-disciplinary research in the transition to parenthood.

III. PROMOTION OF MENTAL HEALTH REVISITED

The promotion of mental health is attaining increasing visibility within the NHS (Ross and Stark, 1998; Jenkins and Ustun, 1998). In Great Britain, a movement that developed through a number of related fields (including Health Education and Community Development) and that, eventually, became explicitly aligned with and

developed further through generic Health Promotion, is increasingly moving towards a distinct professional identity. Echoing the development of other professions in moving from the "market place" with apprenticeship training to the University with professional schools (Albee, 1998), there are now designated Health Promotion Officers with specific remits in mental health promotion in most, if not all, Health Promotion Departments throughout Scotland and the rest of the United Kingdom. Current Government policy imperatives (SODOH, 1998), which, for example, explicitly acknowledge the deleterious effects of social exclusion, are seen as giving further emphasis to the field. Interestingly, the profile (and funding) afforded mental health promotion exists in the absence of convincing national and/or international empirical evidence for its efficacy (Mrazek and Haggerty, 1994; Tilford et al, 1997; Health Education Authority, 1997; Ludbrook and Farrar, 1998).

As noted in Chapter Four, the mental health promotion paradigm "...encompasses matters of individual as well as collective well-being and optimal states of wellness" (Mrazek and Haggerty, 1994, p.334). In the present study, it was hoped that a methodologically sound research intervention aimed at promoting individual parent and couple well-being during the transition to parenthood would fulfil two substantive functions in mental health promotion: first, it would complement and significantly contribute to the existing knowledge base on interventions aimed at promoting the transition to parenthood and, secondly, it would significantly contribute to the scientific credibility of the mental health promotion field.

These functions have been fulfilled. Through the use of appropriate research methodologies, the present study has demonstrated that the brief mental health promotion intervention implemented during the ante-natal period only did not result in significant differences in individual or relationship adjustment among participants in experimental conditions and participants in the control condition in this sample. As noted earlier, this finding is especially interesting when compared with findings from similar promotional studies (with proven efficacy) in which

intervention was conducted during both the ante-natal and post-natal period (Shereshefsky and Yarrow, 1974; Cowan and Cowan, 1987; Parr, unpublished manuscript), and studies from the prevention paradigm (with proven efficacy) in which intervention was conducted during both periods (Elliott et al, 1988), and those studies from the prevention paradigm (without proven efficacy) where intervention was conducted during the ante-natal period only (Brugha et al, unpublished manuscript) or during the post-natal period only (Reid et al, unpublished manuscript). On the basis of these comparisons, it appears that intervention conducted during the ante-natal or post-natal period only is ineffective. In a developing and, to some degree, embryonic field like mental health promotion, a non-significant research finding provides important directions for future research and practice and strategic policy development. While unable to indicate, with absolute certainty, which interventions are effective, there is now reliable evidence to suggest that the current model of ante-natal only intervention was ineffective (at least as applied in this social and geographic setting). That knowledge is clearly of value, both theoretically and practically.

There appear to be a number of further implications of the present study for the field of mental health promotion. These include issues in the selection of models of intervention in mental health promotion, the role of mental health promotion during normative life transitions, and issues in defining "target" populations for intervention. These implications will be considered separately.

a) <u>The Selection of Models of Intervention in Mental Health Promotion</u>

In considering models of intervention in mental health promotion, Tilford et al (1997), in their review of effective mental health promotion interventions, noted that a significant proportion of mental health promotion activity is related to awareness raising (of mental health issues) and stigma reduction (with reference to mental ill-health). Although this kind of endeavour is usually undertaken in

large-scale "campaigns", many small group activities employ a similar strategy. In the present study, an explicit attempt was made to provide factual information regarding the transition to parenthood with the implicit purpose of raising awareness among participants of common difficulties encountered by new parents (including issues in both individual and relationship well-being) and in reducing the stigma associated with post-natal psychological morbidity (which, it was assumed, might delay timeous requests for appropriate treatment.) Given the brevity of the intervention, there was no opportunity to consider behavioural concomitants of this essentially cognitive approach and it is conceivable, on the basis of findings in the present study, that such awareness raising, offered in a behavioural "vacuum", is of limited efficacy. This may suggest that the intuitively pleasing idea (one that informs a significant proportion of mental health promotion activity [Tilford et al, 1997]) that providing people with information is sufficient to positively affect mental health is unfounded: while this activity may be necessary, it may not be sufficient. Of course, as has been repeatedly noted in social psychology "...the relationship between cognition and behaviour is a complex one, moderated by situational factors, individual differences, biases in cognitive processes, and variations in social goals" (Fiske and Taylor, 1984, p.399).

b) The Role of Mental Health Promotion During Normative Life Transitions

As a related issue, and based on findings in the present study, it is interesting to speculate on the utility of universal mental health promotion intervention (intervention applied to a whole population group not on the basis of individual risk for psychological disorder) during normative life transitions.

Normative life transitions are often conceptualised in terms of "process". Through this conceptualisation, "normal" adjustment to a life transition is seen as non-linear and as a "...composite of overlapping, fluid phases that vary from person to person" (Shuchter and Zisook, 1993, p. 23). This process, it is argued, must be

understood multi-dimensionally, through a range of emotional, cognitive and behavioural responses and adaptive responses to a life transition may, in the long term, be associated with the "working through" of maladaptive responses in the short-term. This suggests that objective measurement of adjustment during the short-term will reflect the presence of dissatisfactions and/or dysfunction. In other words, where the adjustment to a normative life transition is uncomplicated, dysfunction and dissatisfaction in the short-term are both necessary and expected functions of eventual adjustment.

The transition to parenthood is a normative life transition, and as such, will be associated with a multi-dimensional range of individual and couple responses. It is conceivable that with individuals and/or couples for whom this transition is uncomplicated (by significant individual psychological morbidity and/or significant relationship dysfunction) either as a function of pre-existing personality or relationship characteristics, available social support or other factors (which may include pre-existing coping abilities, level of insight into the psychological nature of life transitions, motivation) mental health promotion may be entirely unnecessary. The predictable short-term difficulties experienced by these couples may not require intervention. It is arguable, therefore, that resources would better be employed in attempting to develop methods of identifying couples who are at greater risk of individual and/or couple dysfunction during the transition to parenthood and in developing interventions to assist them. However, as suggested by Elliott (1989), it also essential to ensure that any identification of risk for either individuals or couples is not, in itself, a stigmatising activity and that clinical services do not become confined to this small population

c) Issues in Defining Target Populations for Intervention

Identifying those couples "at risk" for individual and/or couple dysfunction during the transition to parenthood will be a complex task. Theoretically, case-finding would have to occur at two levels, the individual and the relationship. However,

the association between individual psychological distress and couple dysfunction during the transition to parenthood is not entirely clear. Attempts at identifying and intervening with women considered "at risk" for post-natal depression have been made with varying levels of success (Elliott et al, 1988; Brugha et al, unpublished manuscript). Further attempts may be facilitated by work undertaken by Cooper et al (1996) in the development and validation of a predictive index for postpartum depression. However, there are, as yet, no predictive indices for the recognition of "at-risk" couples during the transition to parenthood and further developmental research is clearly required.

III. MIDWIFERY AND CLINICAL PSYCHOLOGY AND THE TRANSITION TO PARENTHOOD: IMPLICATIONS FOR PRACTICE

Within the NHS, research has been offered both opportunities and challenges by the Research and Development Initiative, which began with the Research and Development Strategy (Department of Health, 1991). In that document, it was noted that there must be attempts to ensure that research findings are systematically and effectively translated into practice. In the current culture of the NHS, it is incumbent upon researchers to ensure that policy implications of research are identified and disseminated. In fulfilling that obligation, it appears appropriate that the final reflections in this Chapter should be devoted to those tasks.

The importance of ante-natal education has long been recognised by Midwives and others concerned with preparation for parenthood (Rogers et al, 1996). Although a number of voluntary organisations are involved in preparation for parenthood and parenting education, the NHS remains the largest provider of these services, and within the NHS, Midwives are the professional group most closely aligned with this activity. Recent surveys (Kelly, 1998) and consensus

reports (Royal College of Midwives, 1998) conducted by Midwives have identified obstacles to the effective provision of education services for new parents, including unsatisfactory pre-registration and post-registration education of Midwives for parenting education and a significant lack of resources (including manpower).

In the present study, the effects of these obstacles were observed both in the planning of the study and in the interpretation of findings. In planning the present study, one of the guiding aims was to incorporate a cost-effective mental health promotion for prospective parents within existing service provision. The planning process took the better part of one academic year and during that period, extensive collaboration with Midwives was undertaken. Although the Midwives were initially supportive of the research (and continued to offer significant support throughout the research period), they did, in preliminary discussion, report concerns regarding the role and value of psycho-social education for prospective parents. In fact, when considering the information to be provided new parents on post-natal depression, it was suggested that this information might prove deleterious. By telling new mothers about post-natal depression, it was argued, new mothers might be encouraged to develop depressive symptoms. Although this concern was later dispelled, the fact that it was expressed suggests the importance of education for Midwives on mental health issues in parenting education.

It has been argued in this study that the current (and largely desirable) holistic ethos in parent education may require further consideration and specification. During the late ante-natal period, prospective parents are more focussed on the birth and, thus, may require more emphasis on information regarding the birth process. The early and mid ante-natal periods may be more suitable times for the provision of more holistic information and participatory learning. (It has been suggested that participatory learning is considered preferable for adults.) Further research is required to explore this issue but on the basis of findings in the present

study, it may be necessary to reflect on the kinds of demands currently being made of Midwives in ante-natal education. It appears that one of the major implications of this study for Midwives is that the issue of "learning preparedness" of prospective parents requires further evaluation. Once again, the multi-disciplinary nature of research in this area is emphasised.

Kelly (1998), in discussing findings from a recent parenting education survey noted that "...Anecdotal information obtained prior to the survey suggested that Midwives were required to do overtime to accommodate parenting education programmes" (p.24). Clearly, this reflects a manpower issue and strongly indicates that if parenthood education is to develop, management prioritisation of these services and additional support for Midwives in these tasks will be essential.

This study depended upon close collaboration between a Clinical Psychologist and Midwives and was mediated through mutual professional concern for the mental health of first-time parents. The kind of multi-disciplinary collaboration evidenced in this study has recently been called for by the Royal College of Midwives (1998). With reference to Clinical Psychology within the NHS, the Manpower Planning Advisory Group (1990), has argued that "...Clinical Psychology should give more emphasis to skill-sharing with other professions. A 'consultancy model' is recommended in which Clinical Psychologists put their knowledge and skills at the disposal of other professions..." (p. 3), a view endorsed by Elliott (1990b). A further implication of the present study for Clinical Psychologists is that more collaborative promotion and prevention research appears necessary, not only in the transition to parenthood but also in other areas of mental health, in order to ensure the professions' continued effective contribution to the society in which we live.

Unfortunately, this view is not widely endorsed within the profession. It has been noted that prevention and promotion have largely been neglected by Clinical Psychologists in Great Britain (Ross, 1998). The reasons for this neglect appear

two-fold: first, there appears to be a belief that these fields are unscientific (in spite of overwhelming evidence to the contrary [Mrazek and Haggerty, 1994]), and, secondly, a more pragmatic argument suggests that, in the face of growing demand for treatment, scarce economic and human resources must be deployed in service provision. The reticence of Clinical Psychologists to engage in prevention and promotion activities is seen as disastrous by Albee (1998) who has argued that survival of the profession is dependent upon ".. acceptance of the public health strategy of primary prevention, striving for social justice, and thorough grounding in social learning theory..." (p.189). Community Psychology, which is in very early development in Great Britain, is attempting to meet Albee's challenge in the NHS (Ross and Stark, 1995; Bostock, 1998).

Internationally and nationally, there is an increasing demand for mental health care and the prognosis for the future is that the current level of demand is likely to be exceeded (World Bank, 1993). Prophetically, Albee (1959) argued that there would never be sufficient numbers of therapists to effectively meet demands for one-to-one care. He has also noted that mass physical disorders have never been substantially eliminated by individual treatment or increases in the number of treatment providers but through prevention (Albee, 1988). Given that it may be realistic to consider the present incidence and prevalence of mental ill-health as epidemic in western societies, it may be equally realistic to suggest that approaches other than treatment and rehabilitation must seriously be considered.

If Clinical Psychologists within the NHS are compelled to move toward prevention and promotion initiatives in mental health services, how do we expedite this development? First, strategic planning in mental health services must incorporate prevention and romotion perspectives and, as is beginning to occur, further multi-sectoral and multi-disciplinary working must be encouraged. Secondly, effective networks of preventionists and mental health promotion specialists must be established nationally within Scotland and throughout the United Kingdom and must liase with existing international networks (e.g. The World Health Organisation

Task Force on Mental Health Promotion) in order to provide support and direction for Clinical Psychologists (and others) working in the field. Thirdly, Clinical Psychologists and other mental health service providers must be provided with educational opportunities in prevention and promotion in their core training. Finally, financial resources to enable both service development and further research will have to be provided and this will necessitate some shift in resources from treatment and rehabilitation to prevention and promotion.

IV. SUMMARY AND CONCLUSION

There are a number of important implications from the present study for further research in the transition to parenthood and in the more general field of mental health promotion. Further, there are practice-based implications available for both Midwifery and Clinical Psychology. These implications will be summarised here.

In Chapter One, it was noted that, as suggested by Goldberg (1988), the transition to parenthood is associated with psychological, sociological and biological factors operating inter-actively and that this adult transition occupies a pivotal position between individual psychological development and systems (marital dyad and family development) models of behaviour. This understanding indicates the value of multi-disciplinary contributions to the field and in this Chapter the importance of multi-disciplinary research in the transition to parenthood and in the promotion of mental health during this period has been emphasised. Further, it has been argued that the social constructions of the family and parenthood change over time in response to multiple social forces and that research in the field must accommodate this form of cultural sensitivity.

As argued in this Chapter, future mental health promotion initiatives aimed at promoting the transition to parenthood might benefit from focusing on "risk-assessment" for individual and/or couples during this period and on the development of appropriate selective interventions. (As also noted, however, it is

essential to ensure that risk detection does not become an adverse and stigmatising experience for new parents). Future interventions should also be implemented with reference to improved understanding, through further research, of the capacity for new parents to absorb information throughout the transition period (including both the ante-natal and post-natal period). As Midwives remain the principal providers of Parentcraft within the NHS, this issue is of particular importance to them. Finally, the importance of further research and development in mental health promotion and prevention by Clinical Psychologists in the NHS has been noted.

In scientific enquiry, the building of knowledge is an incremental process dependent on the constant formulation and testing of hypotheses. In the context of the social sciences, that process, the ultimate aim of which is the comprehension of complex human behaviour and interaction, is constantly challenged by changing social environments. This scientific inquiry has sought to understand how it is that people can be helped to anticipate and successfully adapt to that most remarkable of adult transitions, the transition to parenthood. Through this inquiry, small pieces of learning have been attained and directions for further inquiry have been proposed. The hypothesis that guided this work remains unsupported but that finding is of value and the present study has, it is hoped, contributed in a small, incremental way to knowledge in the field.

APPENDIX ONE

Homogeneity of Variance Tests per Measure

(i) Measures of Psychological Wellbeing

MEASURE	HOMOGENEITY TEST	RESULT.
CCEI		
Anxiety	Bartlett-Box F	F=7, 56219; p=0.395
Depression		F=7, 56219; p=0.493
Hysteria		F=7, 56219; p=0.558
Obsessionality		F=7, 56219; p=0.629
Phobic Anxiety		F=7, 56219; p=0.202
Somatic Symptoms		F=7, 56219; p=0.023
EPDS	Boxs M	F=45, 28430; p=0.000
HAD (Anxiety sub-scale)		
B/line scores	Bartlett-Box F	F=7, 56219; p=0.013
Change scores	Boxs M	F=105, 62477; p=0.114
HAD (Depression sub-scale)		
B/line scores	Levene Test	Statistic=4.0144;
Change scores	Boxs M	F=45, 30507; p=0.003
STAI – Trait	Bartlett-Box F	F=7, 56219; p=0.000
STAI – State		
B/line scores	Bartlett-Box F	F=7, 56219; p=0.003
Change scores	Boxs M	F=105, 61089; p=0.000

(ii) Measures of Relationship Wellbeing.

MEASURES	HOMOGENEITY TEST	RESULT
CS		
B/line scores	Bartlett-Box F	F=7, 55802; p=0.795
Change scores	Boxs M	F=105, 60893; p=0.000
DAS (Affection) B/line scores	Bartlett-Box F	F=7, 55743; p=0.069
Change scores	Boxs M	F=105, 57526; p=0.000
(Cohesion)		F=7, 55743; p=0.930
B/line scores	Bartlett-Box F	F=105, 59548; p=0.000
Change scores	Boxs M	
		F=7, 55743; p=0.754
(Consensus)		F=105, 60808; p=0.000
B/line scores	Bartlett-Box F	
Change scores	Box M	F=7, 55743; p=0.011
		F=105, 56424; p=0.000
(Satisfaction)		
B/line scores	Bartlett-Box F	F=7, 55273; p=0.314
Change scores	Box M	F=105, 54000; p=0.000
(Total)		
B/line scores	Bartlett Box F	
Change scores	Box M	
MRI		
B/line scores	Bartlett-Box F	F=7, 55802; p=0.051
Change scores	Boxs M	F=105, 61364; p=0.000

(iii) Measures of Pregnancy Wellbeing

MEASURE	HOMOGENEITY TEST	RESULT
SIP	Levene Test	
General Sub-scale		Stat=1.3198; 2 tail sig=0.271
Maternal Sub-scale		Stat=0.8447; 2 tail sig=0.472
Parents Sub-scale		Stat=0.7526; 2 tail sig=0.523
Partner Sub-scale		Stat=0.6449; 2 tail sig=0.588
MAMA (B/line scores)	Levene Test	
Attitude/Sex		Stat=1.0361; 2 tail sig=0.379
Body Image		Stat=1.1795; 2 tail sig=0.321
Marital Relations		Stat=1.1049; 2 tail sig=0.350
Pregnancy/Baby		Stat=0.3496; 2 tail sig=0.789
Somatic Symptoms		Stat=0.5450; 2 tail sig= 0.652
Total		Stat=0.8887; 2 tail sig=0.449
MAMA (Repeated Measures)	Boxs M	
Attitude/Sex		F=9, 137017; p=0.464
Body Image		F=9, 135957; p=0.072
Marital Relations		F=9, 137017; p=0.639
Pregnancy/Baby		F=9, 137017; p=0.137
Somatic Symptoms		F=9, 317017; p=0.400
Total		F=9, 315957; p=0.009
PSI	Bartlett-Box F	
Difficult		F=7, 53975; p=0.067
Distress		F=7, 55743; p=0.066
Dysfunction		F=7, 54540; p=0.000

Total		F=7, 53528; p=0.038

(iv) Measures of Social Support

MEASURE	HOMOGENEITY TEST	RESULT
FSS	Bartlett-Box F	F=7, 56219; p=0.005

(v) Measure of Coping

MEASURE	HOMOGENEITY TEST	RESULT
CES	Bartlett-Box F	
Partner		F=7, 55331; p=0.748
Self		F=7, 55390; p=0.450
Total		F=7, 54924; p=0.648

APPENDIX TWO

Mauchly Sphericity Test per Repeated Measures ANOVA Analysis.

(i) Measures of Psychological Wellbeing.

MEASURE	MAUCHLY SPHERICITY TEST
STAI (State)	W=0.81270 p=0.000
HAD	
(Anxiety Sub-scale)	W=0.68507 p=0.000
(Depression Sub-scale)	W=0.49908 p=0.000
EPDS	W=0.63772 p=0.000

(ii) Measures of Relationship Well-being

CS	W=0.83470 p=0.000
DAS	
Affection Sub-scale	W=0.87575 p=0.001
Cohesion Sub-scale	W=0.70949 p=0.000
Consensus Sub-scale	W=0.85316 p=0.000
Satisfaction Sub-scale	W=0.77578 p=0.000
Total Sub-scale	W=0.83406 p=0.000
MRI	W=0.77642 p=0.000

APPENDIX THREE

Homogeneity Of Variance Tests Per Measure - Couples Scores

MEASURE	HOMOGENEITY TEST	RESULT.
HAD		
Anxiety Sub-scale	Boxs M	F = 1.08406; p =n.s.
Depression Sub-scale		F = 1.77228; p = 0.001
MRI	Boxs M	F = 1.67561; p = 0.003
CS	Boxs M	F = 2.06089; p = 0.000
DAS	Boxs M	
Affection Sub-scale		F = 1.97750; p= 0.000
Cohesion Sub-scale		F = 1.23469; p = 0.135
Consensus Sub-scale		F = 3.02406; p = 0.000
Satisfaction Sub-scale		F = 1.46467; p = 0.023
Total Sub-scale		F = 1.88639; p = 0.000

APPENDIX FOUR

Mauchly Sphericity Test per Repeated Measures ANOVA Analysis - Couples Scores.

MEASURE	MAUCHLY SPHERICITY TEST
HAD	
Anxiety Sub-scale	W = 0.73311; p = 0.000
Depression Sub-scale	W = 0.7423; p = 0.000
MRI	W = 0.77184; p = 0.001
CS	W = 0.76595; p = 0.001
DAS	
Affection Sub-scale	W = 0.84149; p = 0.04
Cohesion Sub-scale	W = 0.59933; p= 0.000
Consensus Sub-scale	W = 0.83409; p = 0.021
Satisfaction Sub-scale	W = 0.72597; p = 0.000
Total Sub-scale	W = 0.73419; p = 0.001

APPENDIX FIVE

HAD Scale (Depression): Mean Raw Scores/Standard Deviations/Median Scores per Condition (Women Only) (n = 123 participants)

Condition	B/line	Month One	Month Two	Month Three	Month Four	Month Six
Control (n=31)						
m=	3.4	3.9	3.7	3.3	2.6	2.9
s.d.=	2.5	2.2	3.2	3.1	2.7	2.2
med=	3	4	2.5	2	2	2
W/book (n=28)						
m=	3.9	5.1	4.1	4.2	3.9	3.6
s.d=	3.3	3.3	3.1	2.7	3.1	3.3
med=	3	4	3	4	3	3
Lecture (n=33)						
m=	5.1	5.4	4.8	4.4	4.7	5.4
s.d.=	3.5	3.5	4.5	4.0	4.9	3.8
med=	4	5	3	3	3	3
Discuss. (n=31)						
m=	3.8	5.5	3.3	3.2	3.2	3.7
s.d.=	2.4	4.5	3.1	3.1	3.0	4.2
med=	3	4	3	2	3	3
Total (n=123)						
m=	4.1	4.9	3.9	3.7	3.6	3.9
s.d.=	2.9	3.5	3.5	3.3	3.6	3.8
med=	4	4	3	3	2	3

APPENDIX SIX

Homogeneity of Variance Tests for CS, MRI and DAS using the HAD Scale as Covariate.

(i) HAD Scale (Anxiety Sub-scale) as Covariate.

MEASURE	HOMOGENEITY TEST	RESULT.
CS	Boxs M	F = 1.5.2870; p = 0.000
MRI	Boxs M	F = 1.86385; p = 0.000
DAS	Boxs M	
Affection Sub-scale		F = 1.84336; p= 0.000
Cohesion Sub-scale		F = 1.77423; p = 0.000
Consensus Sub-scale		F = 3.53322; p = 0.000
Satisfaction Sub-scale		F = 1.83508; p = 0.000
Total Sub-scale		F = 2.60283; p = 0.000

(ii) HAD Scale (Depression Sub-scale) as Covariate.

MEASURE	HOMOGENEITY TEST	RESULT.
CS	Boxs M	F = 1.52870; p = 0.000
MRI	Boxs M	F = 1.86385; p = 0.000
DAS	Boxs M	
Affection Sub-scale		F = 1.84336; p = 0.000
Cohesion Sub-scale		F = 1.77423; p = 0.000
Consensus Sub-scale		F = 3.53322; p = 0.000
Satisfaction Sub-scale		F = 1.83508; p = 0.000
Total Sub-scale		F = 2.60283; p = 0.000

APPENDIX SEVEN

Regression Sum Of Squares: HAD (Anxiety Sub-Scale) And Communication Scale (Cs)/Dyadic Adjustment Scale (Das)/Marital Role Inventory (Mri)

MEASURE	df	F	p
CS	5,219	3.3	0.007
DAS:			
Affection	5,214	0.5	0.74
Cohesion	5,217	2.7	0.02
Consensus	5,218	2.1	0.06
Satisfaction	5,218	4.2	0.001
Total	5,217	3.1	0.01
MRI	5,220	3.13	0.04

Regression Sum of Squares: HAD (Depression Sub-Scale) and Communication Scale (CS)/Dyadic Adjustment Scale (DAS)/Marital Role Inventory (MRI)

MEASURE	df	F	p
CS	5,219	2.6	0.03
DAS:			
Affection	5,214	1.7	0.12
Cohesion	5,217	1.5	0.17
Consensus	5,218	2.2	0.05
Satisfaction	5,218	6.1	0.001
Total	5,217	3.5	0.005
MRI	5,220	2.00	0.04

REFERENCES

Abbott, D.A. & Brady, G.H. (1985) The relation of child age, gender and number of children to the marital adjustment of wives. Journal of Marriage and the Family, 47, 77-84.

Abidin, R.R. (1990) Parenting Stress Index - Short Form Test Manual. Charlottesville, Va.: Pediatric Psychology Press.

Abramson, L.Y. Seligman, M.E.P. & Teasdale, J.D. (1978) Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 75-90.

Adams, B.N. Brownstein, M.S.W. Rennalls, I.M. & Schmitt, M.H. (1976) The pregnant adolescent - A group approach. Adolescence, 11, 467-485.

Albee, G.W. (1959) Mental Health Manpower Trends. New York: Basic Books.

Albee, G.W. (1998) Fifty years of Clinical Psychology: Selling our soul to the devil. Journal of Applied and Preventive Psychology, 7, 189-194.

Albright, A. (1993) Postpartum depression: An overview. Journal of Counselling and Development, 71, 316-320.

Alder, E.M. Cook, A. Davidson, D. West, C. & Bancroft, J. (1986) Hormones, mood and sexuality in lactating women. British Journal of Psychiatry, 148, 74-79.

Alexander, F. (1989) Education - A Preventative Measure in Postnatal Mood Disorder. Unpublished Manuscript.

American Psychiatric Association (1987) Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised. Washington, DC: American Psychiatric Association.

American Psychiatric Association (1994) Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: American Psychiatric Association.

Anastasi, A. (1988) Psychological Testing, Sixth Edition. New York: MacMillan.

Antonovsky, A. (1979) Health, Stress and Coping. San Francisco, CA: Jossey-Bass Publications.

Aranoff, J.L. & Lewis, S. (1979) An innovative experience for couples expecting their first child. The American Journal of Family Therapy, 7, 51-55.

Armitage, P. & Hills, M (1982) The two-period crossover trial. The Statistician, 31, 119-131.

Atkinson, A.K. & Rickel, A.U. (1984) Short reports: Postpartum depression in primiparous parents. Journal of Abnormal Psychology, 93, 115-119.

Attkisson, C.C. & Zjch, J.M. (1990) Depression Primary Care: Screening and Detection. London: Routledge.

Ayrshire and Arran Health Board (1996) Health and ill-health in Ayrshire and Arran: The 1996 Report of the Director of Public Health.

Badinter, E. & Davis, L. (1995) XY: On Masculine Identity. New York: Columbia University Press.

Ballard, C.G. Davis, R. Cullen, P.C. Mohan, R.N. & Dean, C. (1994) Prevalence of postnatal psychiatric morbidity in mothers and fathers. British Journal of Psychiatry, 164, 782-788.

Ballinger, C.B. Kay, D.S.G. Naylor, G.J. & Smith, A.H.W. (1982) Some biochemical findings during pregnancy and after delivery in relation to mood change. Psychological Medicine, 12, 549-556.

Bassoff, E.S. (1984) Relationship of sex-role characteristics and psychological adjustment in new mothers. Journal of Marriage and the Family, May, 449-454.

Beck, A.T. (1972) Depression: Causes and Treatment. Philadelphia: University of Pennsylvania Press.

Beck, C.T. (1992) The lived experience of postpartum depression: A phenomenological study. Nursing Research, 41, 166-170.

Beck, A.T. Ward, C.H. Mendelson, M. Mock, J.E. & Erbaugh, J. (1961) An inventory for measuring depression. Archives of General Psychiatry, 4, 561-569.

Beck, A.T. Ward, C.H. Mendelson, M. Mock, J.E. & Erbaugh, J.K. (1962) Reliability in psychiatric diagnoses: 2. A study of consistency in clinical judgements and ratings. American Journal of Psychiatry, 119, 351-357.

Beck, A.T. Rush, A.J. Shaw, B.F. & Emery, G. (1979) Cognitive Therapy of Depression. New York, N.Y.: Guilford Press.

Bell, A.J. Land, N.M. Milne, S. & Hassanyeh, F. (1994) Long term outcome of postpartum psychiatric illness requiring admission. Journal of Affective Disorders, 31, 67-70.

Belsky, J. (1981) Early human experience: A family perspective. Developmental Psychology, 17, 3-23.

Belsky, J. (1985) Exploring individual differences in marital change across the transition to parenthood: The role of violated expectations. Journal of Marriage and the Family, Nov, 1037-1044.

Belsky, J. Spanier, G.B. & Rovine, M. (1983) Stability and change in marriage across the transition to parenthood. Journal of Marriage and the Family, 45, 567-577.

Belsky, J. Lang, M.E. & Rovine R. (1985a) Stability and change in marriage across the transition to parenthood: A second study. Journal of Marriage and the Family, 47, 855-865.

Belsky, J. Perry-Jenkins, M. & Crouter, A.C. (1985b) The work - family interface and marital change across the transition to parenthood. Journal of Family Issues, 6, 205-220.

Belsky, J. Lang, M. & Huston, T.L. (1986) Sex typing and division of labour as determinants of marital change across the transition to parenthood. Journal of Personality and Social Psychology, 50, 517-522.

Belsky, J. & Pensky, E. (1988) Marital change across the transition to parenthood. Marriage and Family Review, 12, 133-155.

Bem, S.L. (1975) Sex role adaptability: One consequence of psychological androgyny. Journal of Personality and Social Psychology, 31, 634-643.

Bem, S.L. Martyna, W. & Watson, C. (1976) Sex typing and androgyny: Further explorations of the expressive domain. Journal of Personality and Social Psychology, 34, 1016-1023.

Berrueta-Clement, J.R. Schweinhart, L.J. Barnett, M.W. Epstein, A.S. & Weikart, D.P. (1984) Changed Lives: The Effects of the Perry Pre-school Program on Youths through Age 19. Ypsilanti, MI: High/Scope Educational Research Foundation.

Blair, R.A. Gilmore, J.S. Playfair, H.R. Tisdall, M.W. & O'Shea, M.W. (1970) Peurperal depression: A study of predictive factors. Journal of the Royal College of General Practitioners, 19, 22-25.

Blake, J. (1982) Demographic revolution and family evolution: Some implications for American women. In Women: A Developmental Perspective, ed. Berman, P.W. & Ramey, E.R. pp 299-311. Washington, DC: US Department of Health and Human Services.

Blood, R.O. & Wolfe, D.M. (1960) Husbands and Wives: The Dynamics of Married Living. Glencoe, Illinois: Free Press.

Bloom, B.L. (1984) Community Mental Health. Monterey, Ca.: Brooks-Cole.

Blum, H.P. (1978) Reconstruction in a case of postpartum depression. In The Psychoanalytic Study of the Child, Vol.33, ed. Solnit, A.J. Eissler, R.S. Freud, A. Kris, M. & Neuaber, P.B. pp 335-362. New Haven, CT: Yale University Press.

Bonnar, J. Franklin, M. Nott, P.N. & McNeilly, A.S. (1975) Effect of breast feeding on pituitary-ovarian function after childbirth. British Medical Journal, iv, 82-84.

Bostock, J. (1998) From clinic to community: generating social validity in clinical psychology. Clinical Psychology Forum, 121, 2-5.

Brannen, J. & Moss, P. (1991) Managing Mothers: Dual-Earner Households After Maternity Leave. London: Unwin Hymen.

Braverman, J. & Roux, J.F. (1978) Screening for the patient at risk for postpartum depression. Obstretics and Gynaecology, 52, 731-736.

Bridge, L.R. Little, B.C. Hayworth, J. Dewhurst, J. & Priest, R.G. (1985) Psychometric predictors of post-natal depressed mood. Journal of Psychosomatic Research, 29, 325-331.

Brockington, I.F. Cernik, K.F. Schofield, E.M. Downing, A.R. Francis, A.F. & Keelan, C. (1981) Puerperal psychosis: phenomena and diagnosis. Archives of General Psychiatry, 38, 829-833.

Brockington, I.F. Winokur, G. & Dean, C. (1982) Puerperal psychosis. In Motherhood and Mental Illness, ed. Brockington, I.F. & Kumar, R. pp 37-69. London: Academic Press.

Brown, W.A. (1979) Psychological Care During Pregnancy and the Postpartum Period. New York: Raven Press Books.

Brown, G.W. & Harris, T. (1978) Social Origins of Depression: A Study of Psychiatric Disorder in Women. New York: Free Press.

Brugha, T. Wheatley, S.L. Shapiro, D. Jones, D.R. Taub, N.A. Friedman, T. Culverwell, A. & Kirwan, P.H. Prevention of postnatal depression by brief antenatal intervention. (Unpublished Manuscript).

Brugha, T.S. Sharp, H.M. Cooper, S.A. Weisender, C. Britto, D. Shinkwin, R. Sherrif, T. & Kirwan, P.H. (1998). The Leicester 500 Project: Social support and the development of postnatal depressive symptoms, a prospective short survey. Psychological Medicine, 28, 63-79.

Bryman, A. & Cramer (1997) Quantitative Data Analysis with SPSS for Windows. London: Routledge.

Burgess, E.W. & Locke, H.J. (1945) The Family: From Institution to Companionship. New York: American Book Company.

Burns, D.D. (1989) The Feeling Good Handbook. New York: Williams Morrow.

Burke, C.W. & Roulet, F. (1970) Increased exposure of tissues to cortisol in late pregnancy. British Medical Journal, 1, 657-659.

Calvert, J. (1985) Motherhood. In Women, the Family and Social Work, ed. Brook, F. & Davis, A., London: Tavistock.

Campbell, S.B. & Cohn, J.F. (1991) Prevalence and correlates of postpartum depression in first-time mothers. Journal of Abnormal Psychology, 100, 594-599.

Campbell, A. Converse, P.E. & Rogers, W.L. (1976) The Quality of American Life. New York: Russell Sage Foundation.

Caplan, G. (1951) Mental hygiene work with a group of expectant mothers - A group psychotherapeutic approach. Mental Hygiene, 35, 41-50.

Charney, D.S. Heninger, G.R. & Sternberg, D.E. (1984) Serotonin function and mechanism of action of anti-depressant treatment. Archives of General Psychiatry, 41, 359-365.

Cherlin, A. (1977) The effect of children on marital dissolution. Dimography, 14, 265-272.

Clulow, C.F. (1982) To Have and to Hold: Marriage, the First Baby and Preparing Couples for Parenthood. Aberdeen: Aberdeen University Press.

Coltrane, S. (1989) Household labour and the routine productions of gender. Social Problems, 36, 473-490.

Combes, G. & Schonveld, A. (1992) Life will Never be the Same Again: Learning to be a First-Time Parent. A Review of Antenatal and Postnatal Health Education. London: Health Education Authority.

Cook, T.D. & Campbell, D.T. (1979) Quasi-Experimentation: Design and Analysis Issues for Field Settings. Chicago: Rand McNally.

Cooper, N. & Stevenson, C. (1998) New science and psychology. The Psychologist, 11, 484-485.

Cooper, P.J. Campbell, E.A. Day, A. Kennerley, H. & Bond, A. (1988) Non-psychotic psychiatric disorder after childbirth. British Journal of Psychiatry, 152, 799-806.

Cooper, J.E. Copeland, J.R.M. Brown, G.W. Harris, T. & Gourlay, A.J. (1977) Further studies on interviewer training and inter-rater reliability of the Present State Examination (PSE). Psychological Medicine, 7, 517-523.

Cowan, E.L. (1986) Primary prevention in mental health: Ten years of retrospect and ten years of prospect. In A Decade of Progress in Primary Prevention, ed. Kessler, M. & Goldston, S.E. pp 3-45. Hanover: University Press of New England.

Cowan, C.P. & Cowan, P.A. (1987) A preventative intervention for couples becoming parents. In Research on Support for Parents and Infants in the Postnatal Period, ed. Boukydis, C.F.Z. pp - . Norwood, N.J.: Ablex Publishing Corporation.

Cowan, P.A. & Cowan, C.P. (1988) Changes in marriage during the transition to parenthood: Must we blame the baby? In The Transition to Parenthood: Current Theory and Research, ed. Michaels, G.Y. & Goldberg, W.A. pp 114-154. New York: Cambridge University Press.

Cowan, C.P. & Cowan P. (1998) New Families: Modern Couples as New Pioneers. In All Our Families: New Policies for a New Century, ed. Mason, M.A., Skolnick, A. & Sugarman, S.D, pp 169-192. Oxford: Oxford University Press.

Cowan, C.P. Cowan, P.A. Coie, L. & Coie, J. (1978) Becoming a family: The impact of a first child's birth on the couple's relationship. In The First Child and Family Formation, ed. Newman, L. & Miller, W. pp - . Chapel Hill, NC: Carolina Population Centre.

Cowan, C.P. Cowan, P.A. Heming, G. Garrett, E. Coysh, W. Curtis-Boles, H. & Boles, A. (1985) Transition to parenthood: His, hers, theirs. Journal of Family Issues, 6, 451-481.

Cox, J.L. Conner, Y. & Kendall, R.E. (1982) Prospective study of the psychiatric disorders of childbirth. British Journal of Psychiatry, 140, 111-117.

Cox, J. & Holden, J. (1994) Perinatal Psychiatry: Use and Misuse of the Edinburgh Post-natal Depression Scale. London: Gaskell.

Cox, J.L. Holden, J.M. Sagovsky, R. (1987) Detection of postnatal depression: development of a ten-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry, 150, 782-786.

Cox, J.L. Murray, D. & Chapman, G. (1993) A Controlled Study of the Onset, Duration and Prevalence of Postnatal Depression. British Journal of Psychiatry, 163, 27-31.

Crisp, A.H. & Priest, R.G. (1971) Psychoneurotic profiles in Middle Age. British Journal of Psychiatry, 119, 385-392.

Crnic, K.A. Greenberg, M.T. Ragozin, A.S. Robinson, N.M. & Basham, R.B. (1983) Effects of stress and social support on mothers and premature and full-term infants. Child Development, 54, 209-217.

Crohan, S.E. (1996) Marital quality and conflict across the transition to parenthood in African American and White Couples. Journal of Marriage and the Family, 58, 933-944.

Crown, S. & Crisp, A.H. (1979) Manual of the Crown Crisp Experiential Index. Kent, U.K.: Hodder and Stoughton Ltd.

Crown, S. Duncan, K.P. & Howell, R.W. (1970) Further evaluation of the Middlesex Hospital Questionnaire (MHQ). British Journal of Psychiatry, 116, 33-37.

Cutrona, C.E. (1983) Causal attributions and perinatal depression. Journal of Abnormal Psychology, 92, 161-172.

Cutrona, C.E. (1984) Social support and stress in the transition to parenthood. Journal of Abnormal Psychology, 93, 378-390.

Dalton, K. (1971) Prospective study into puerperal depression. British Journal of Psychiatry, 118, 689-692.

Dalton, K. (1980) Depression after Childbirth. Oxford: Oxford University Press.
D'Andrea, M. (1984) Primary prevention and high risk populations. The Personnel and Guidance Journal, May, 554-558.

Daniluk, J.C. & Herman, A. (1984) Parenthood decision-making. Family Relations, 33, 607-612.

Davenport, Y.B. & Adland, M.L. (1982) Postpartum psychoses in female and male bipolar manic depressive patients, 52, 288-297. Americal Journal of Orthopsychiatry.

Davidson, J.R.T. (1972) Postpartum mood change in Jamaican women: A description and discussion of its significance. British Journal of Psychiatry, 121, 659-663.

Davis, L.D. & Grace, H. (1971) Anticipatory counselling of unwed pregnant adolescents. Nursing clinics of North America, 6, 581-590.

Davis, C.D. & Morrone, F.A. (1962) An objective evaluation of a prepared childbirth programme. American Journal of Obstetrics and Gynaecology, 84, 1196-1206.

Dean, C. & Kendell, R.E. (1981) The symptomatology of puerperal illnesses. British Journal of Psychiatry, 139, 128-133.

Deater-Deckard, K. Pickering, K. Dunn, J.F. Golding, J (1998) Family Structure and Depressive Symptoms in Men Preceding and Following the Birth of a Child. American Journal of Psychiatry, 155, (6), 818-823.

Department of Health (1991) Research for Health: A research and development strategy for the NHS. London: HMSO.

Derogatis, L.R. Lipman, R.S. & Covi, L. (1975) SCL-90: An outpatient psychiatric rating scale. Psychopharmacology Bulletin, 9, 13-28.

Dewi-Rees, W. & Lutkins, S.G. (1971) Parental depression before and after childbirth. Journal of the Royal College of General Practitioners, 21, 26-31.

Dick-Read, G. (1959) Childbirth Without Fear: The Principles and Practice of Natural Childbirth (Second Edition). New York: Harper & Row.

Downie, R.S. Fyfe, C. & Tanahill, A. (1990) Health Promotion Models and Values. Oxford: Oxford University Press.

Dragonas, T. Thorpe, K & Golding, J (1992) Transition to fatherhood: A cross-cultured comparison. Journal of Psychosomatic Obstetrics and Gynaecology, 13, 1-19.

Duncan, S.W. & Markham, H.J. (1988) Intervention programmes for the transition to parenthood: Current status from a prevention perspective. In The Transition to Parenthood, ed. Michaels, G.Y. & Goldberg, W.A. pp 270-310. New York: Cambridge University Press.

Dunst, C.J. Jenkins, V. & Trivette, C.M. (1984) Family support scale: Reliability and validity. Journal of Individual, Family and Community Wellness, 1, 45-52.

Dyer, E.D. (1963) Parenthood as crisis: A Re-study. Marriage and Family Living, 25, 196-201.

Elliott, S.A. (1989) Psychological strategies in the prevention and treatment of postnatal depression. In Psychological aspects of obstetrics and gynaecology, ed. Oates, M.R. pp 879-203. London: Balliere Tindall.

Elliott, S. (1990a) Antenatal Education and Therapy. Journal of Reproductive and Infant Psychology, 8, 244-248.

Elliott, S.A. (1990b) Commentary on 'Childbirth as a life event'. Journal of Reproductive and Infant Psychology, 8, 147-159.

Elliott, S.A. (1994) Uses and Misuses of the Edinburgh Postnatal Depression Scale in primary care: a comparison of models developed in health visiting. In Perinatal Psychiatry: Use and Misuses of the Edinburgh Postnatal Depression Scale. ed. Cox, J. & Holden J., pp 221-232. London: Gaskell.

Elliott, S.A. Rugg, A.J. Watson, J.P. & Brough, D.I. (1983) Mood changes during pregnancy and after the birth of a child. British Journal of Clinical Psychology, 22, 295-308.

Elliott, S.A. Sanjack, M. & Leverton, T.J. (1988) Parent groups in pregnancy: A preventative intervention for postnatal depression? In Marshalling Social Support: Formats, Processes and Effects, ed. Gotlieb, B. pp 87-110. London: Sage Publications.

Elliott, S.A. & Watson, J.P. (1985) Sex During Pregnancy and the First Postnatal Year. Journal of Psychosomatic Research, 29 (5), 541-548.

Elliott, S.A. Watson, J.P. & Brough, D.I. (1985) Transition to parenthood by British couples. Journal of Reproductive and Infant Psychology, 3, 28-39.

Endicott, J. & Spitzer, R.L. (1978) A diagnostic interview: The schedule for affective disorders and schizophrenia. Archives of General Psychiatry, 35, 837-844.

Entwisle, D.R. & Doering, S.G. (1981) The First Birth: A Family Turning Point. Baltimore, M.D.: Johns Hopkins University Press.

Everitt, B.S. (1996) Making Sense of Statistics in Psychology, A Second-Level Course. New York, N.Y.: Oxford University Press.

Eysenck, H.J. (1952) The Scientific Study of Personality. London: Routledge and Kegan Paul.

Eysenck, H.J. & Eysenck, S.G.B. (1975) Manual of the Eysenck Personality Questionnaire. London: Hodder and Stoughton.

Fedele, N.M. Golding, E.R. Grossman, F.K. & Pollack, W.S. (1988) Psychological issues in adjustment to first time parenthood. In The Transition to Parenthood, ed. Michaels, G.Y. & Goldberg, W.A. pp 85-113. New York: Cambridge University Press.

Feggetter, P. & Garth, D. (1981) Non-psychotic psychiatric disorders in women one year after childbirth. Journal of Psychosomatic Research, 25, 369-372.

Feldman, H. (1971) The effects of children on the family. In Family Issues of Employed Women in Europe and America. ed. Michael, A. pp 104-125. Lieden: Briu.

Feldman, S.S. Biringen, Z.C. & Nash, S.C. (1981) Fluctuations of sex-related self attributions as a function of stage of family life cycle. Developmental Psychology, 17, (1), 24-35.

Feldman, S.S. & Nash, S.C. (1984) The transition from expectancy to parenthood: Impact of the firstborn child on men and women. Sex Roles, 11, 84-86.

Felner, R.D. Farber, S.S. & Primavera, J. (1983a) Transitions and stressful life events: A model for primary prevention. In Preventative Psychology: Theory Research and Practice, ed. Felner, R.D. Jason, L.A. Moritsugu, J. & Farber, S.S. pp 199-215. Oxford: Pergamon Press.

Felner, R.D. Jason, L.A. Moritsugu, J. & Farber, S.S. (1983b) Preventative psychology: Evolution and current status. In Preventative Psychology: Theory Research and Practice, ed. Felner, R.D. Jason, L.A. Moritsugu, J. & Farber, S.S. pp 3-25. Oxford: Pergamon Press.

Finlay-Jones, R. Brown, G.W. Duncan-Jones, P. Harris, T. Murphy, E. & Prudo, R. (1980) Depression and anxiety in the Community: Replicating the diagnosis of a case. Psychological Medicine, 110, 445-454.

Fisher, R.A. (1935) The Design of Experiments. Edinburgh: Oliver & Boyd.

Fiske, S.T. & Taylor, S.E. (1984) Social Cognition. New York: Random House.

Fleming, A.S. Ruble, D.N. Flett, G.L. & Van Wagner, V. (1990) Adjustment in first-time mothers: Changes in mood and mood content during the early postpartum months. Developmental Psychology, 1, 137-143.

Flesch, R. (1948) A new reliability yardstick. Journal of Applied Psychology, 32, 221-233.

Ford, K. (1994) Labouring the point. Health Service Journal, January, 104, 26.

Fournier, D.G. Olson, D.H. & Druckman, J.M. (1983) Assessing marital and premarital relationships: The PREPARE/ENRICH Inventories. In Marriage and Family Assessment, ed. Filsinger, E.E. pp 229-250. Newbury Park, CA: Sage Publishing.

Freeman, T. (1951) Pregnancy as a precipitant of mental illness in men. British Journal of Medical Psychology, 24, 49-54.

Gard, P.R. Handley, S.L. Parsons, A.D. & Waldron, G. (1986) A multi-variate investigation of postpartum mood disturbance. British Journal of Psychiatry, 148, 567-575.

Garrett, E.V. (1983) The impact of a first child on couple role arrangements. Paper presented at the meeting for the Society for Research in Child Development, Detriot.

Gelder, M. (1978) Hormones and postpartum depression. In Mental Illness in Pregnancy and the Puerperium, ed. Sandler, M. pp 80-90. Oxford: Oxford Medical Publications.

George, A.J. Copeland, J.R.M. & Wilson, K.C.M. (1980) Serum prolactin and the post partum blues syndrome. British Journal of Pharmacology, 70, 102-103.

George, A. & Sandler, M. (1988) Endocrine and biochemical studies in puerperal mental disorders. In Motherhood and Mental Illness 2: Causes and Consequences, ed. Kumar, R. & Brockington, I.F. pp 78-112.

Gerrard, J Holden, J.M. Elliott, S.A. McKenzie, P, McKenzie J. and Cox, J.L. (1993) A trainer's perspective of an innovative programme teaching health visitors about the detection, treatment and prevention of postnatal depression. Journal of Advanced Nursing, 18, 1825-1832.

Ginath, Y. (1974) Psychoses in males in relation to their wives' pregnancy and childbirth. The Israel Annals of Psychiatry, 12, 227-237.

Glenn, N.D. (1975) Psychological well-being in the postparental stage: Some evidence from national surveys. Journal of Marriage and the Family, Feb, 105-110.

Glenn, N.D. & Weaver, C.N. (1978) A multi-variate, multi-survey study of marital happiness. Journal of Marriage and the Family, May, 269-282.

Goldberg, D. (1972) The Detection of Psychiatric Illness by Questionnaire. London: Oxford University Press.

Goldberg, W.A. (1988) Perspectives on the transition to parenthood. In The Transition to Parenthood, ed. Michaels, G.Y. & Goldberg, W.A. pp 1-20. New York: Cambridge University Press.

Goldberg, D. & Williams, P. (1988) A User's Guide to the General Health Questionnaire. Windsor: NFER-Nelson.

Goldschmidt, W. (1974) Ethology, ecology, and ethnological realities. In Coping and Adaptation, ed. Coelho, G.V. Hamburg, D.A. & Adams, J.E. pp 13-31. New York: Basic Books.

Gordon, R.E. (1961) Prevention of Postpartum Emotional Difficulties. Ann Arbor, Michigan: University Microfilms Inc.

Gordon, R.E. & Gordon, K.K. (1959) Social factors in the prediction and treatment of emotional disorders of pregnancy. American Journal of Obstetics and Gynaecology, 77, 1047-1083.

Gordon, R.E. & Gordon, K.K. (1960) Social factors in prevention of postpartum emotional problems. Obstetrics and Gynaecology, 15, 433-438.

Gordon, R.E. Kapostins, E.E. & Gordon, K.K. (1965) Factors in postpartum emotional adjustment. Obstretics and Gynaecology, 25, 158-166.

Gotlib, I.H. Whiffen, V.E. Mount, J.H. Milne, K. & Cordy, N.I. (1989) Prevalence rates and demographic characteristics associated with depression in pregnancy and the postpartum. Journal of Consulting and Clinical Psychology, 57, 269-274.

Gotlib, I.H. Whiffen, V.E. Wallace, P.M. & Mount, J.H. (1991) Prosepectove Investigation of Postpartum Depression: Factors Involved in Onset and Recovery. Journal of Abnormal Psychology, 100, 2, 122-132.

Gray, J.D. Cutler, C.A. Dean, J.G. & Kempe, C.H. (1979) Predictions and prevention of child abuse and neglect. Journal of Social Issues, 35, 127-139.

Green, J.M. (1998) Postnatal depression or perinatal dysphoria? Findings from a longitudinal community-based study using the Edinburgh Postnatal Depression Scale. Journal of Reproductive and Infant Psychology, 16, 143-155.

Greene, J. & D'Oliveira, M. (1982) Learning to use Statistical Tests in Psychology. Milton Keynes: OUP.

Greenhouse, S.W. & Geisser, S (1959) On the methods in the analysis of profile data. Psychometrika, 24, 95-112.

Greenwood, J. & Parker, G. (1984) The dexamethasone suppression test in the puerperium. Australian and New Zealand Journal of Psychiatry, 18, 282-284.

Grossman, F.K. Eichler, L.S. & Winickoff, S.A. (1980) Pregnancy, Birth and Parenthood. San Francisco: Jossey-Bass.

Hackel, L.S. & Ruble, D.N. (1992) Changes in the marital relationship after the first baby is born: Predicting the impact of expecting disconfirmation. Journal of Personality and Social Psychology, 62, 944-957.

Handley, S.L. Dunn, T.L. Baker, J.M. Cockshott, C. & Gould, S. (1977) Mood changes in puerperium, plasma tryptophan and cortisol concentrations. British Medical Journal, 2, 18-22.

Handley, S.L. Dunn, T.L. Waldon, G. & Baker, J.M. (1980) Tryptophan, cortisol and puerperal mood. British Journal of Psychiatry, 136, 498-508.

Harding, J.J. (1989) Postpartum psychiatric disorders: A review. Comprehensive Psychiatry, 30, 109-112.

Harriman, L.C. (1983) Personal and marital changes accompanying parenthood. Family Relations, 32, 387-394.

Harris, B. (1994) Biological and hormonal aspects of postpartum depressed mood: Working towards strategies for prophylaxis and treatment. British Journal of Psychiatry, 164, 288-292.

Harris, R.L. (1985) A retrospective study of women's psychosocial changes among women aged 30-60. Human Development, 28, 261-266.

Harvey, I. & McGrath, G. (1988) Psychiatric morbidity in spouses of women admitted to a mother and baby unit. British Journal of Psychiatry, 152, 506-510.

Hatotani, N. Nishikubo, M. & Kitayama, I. (1979) Periodic psychoses in the female and the reproductive process. In Psychoneuroendocrinology in Reproduction, ed. Zichella, L. & Panachevi, P. pp 55-68. Amsterdam: North Holland-Elsevier.

Havighurst, R.J. (1972) Development Tasks and Education, Third Edition. New York: Longman Inc.

Hawton, K. Salkovskis, P.M. Kirk, J. & Clark, D.M. (1989) Cognitive Behaviour Therapy for Psychiatric Problems: A Practical Guide. Oxford: Oxford University Press.

Hayworth, J. Little, B.C. Carter, S.B. Raptopoulos, P. Priest, R.G. & Sandler, M. (1980) A predictive study of postpartum depression: Some pre-disposing characteristics. British Journal of Medical Psychology, 53, 161-167.

Health Education Authority (1997) Mental Health Promotion A Quality Framework. London: Health Education Authority.

Heaney, C.A. (1992) Enhancing social support at the workplace: Assessing the effects of the Caregiver Support Programme. Health Education Quarterly, 18, 477-494.

Henderson, A.D. & Brouse, A.J. (1991) The experiences of new fathers during the first three weeks of life. Journal of Advanced Nursing. 16, 293-298.

Heninger, G.R. Charney, D.S. & Sternberg, D.E. (1984) Serotonergic function in depression. Archives of General Psychiatry, 41, 398-402.

Herzog, A. & Detre. T (1976) Psychotic reactions associated with childbirth. Diseases of the Nervous System, 37, 229-235.

Hicks, M.W. & Platt, M. (1970) Marital Happiness and Stability: A Review of Research in the Sixties. Journal of Marriage and the Family, Nov, 553-574.

Hill, R. (1949) Families Under Stress. New York: Harper.

Hillier, C.A. & Slade P. (1989) The impact of Antenatal classes on knowledge, anxiety and confidence in primiparous women. Journal of Reproductive and Infant Psychology, 7, 3-13.

Hills, M. & Armitage, P (1979) The two-period cross-over clinical trial. British Journal of Clinical Pharmacology, 8, 7-20.

Hobbs, D.F. (1965) Parenthood as crisis: A third study. Journal of Marriage and the Family, 27, 367-372.

Hobbs, D.F. (1968) Transition to parenthood: A replication and extension. Journal of Marriage and the Family, 30, 413-417.

Hobbs, D.F. & Cole, S. (1976) Transition to parenthood: A decade of replication. Journal of Marriage and the Family, 38, 723-731.

Hobbs, D.F. & Wimbush, J. (1977) Transition to parenthood by black couples. Journal of Marriage and the Family, Nov, 677-689.

Hobfoll, S.E. Ritter, C. Lavin, J. Hulsizer, M.R. & Cameron, R.P. (1995) Depression prevalence and incidence among inner-city pregnant and postpartum women. Journal of Consulting and Clinical Psychology, 63, 445-453.

Hock, E. Schirtzinger, M.B. Lutz W.J. Windam, A.N. (1995) Maternal Depressive Symptomatology Over the Transition to Parenthood: Assessing the Influence of Marital Satisfaction and Marital Sex Role Traditionalism. Journal of Family Psychology, 9, (1), 79-88.

Hodgson, R.J. & Abbasi, T. (1995) Effective Mental Health Promotion: Literature Review. Technical Report No.13. Health Promotion Wales: Cardiff.

Hoffman, L.W. (1978) Effects of the first child on the woman's role. In The First Child and Family Formation, ed. Newman, L. & Miller, W. pp 340-367. Chapel Hill, NC: Carolina Population Centre.

Holden, J. (1994) Can Non-Psychotic Depression be Prevented? In Perinatal Psychiatry: Use and Misuses of the Edinburgh Postnatal Depression Scale. ed. Cox, J. & Holden J., pp 54-81. London: Gaskell.

Holden, J. Sagovsky, R. & Cox, J.L. (1989) Counselling in general practice setting: a controlled study of health visitor intervention in treatment of postnatal depression. British Medical Journal, 298, 223-226.

Hondagneu-Sotelo, P. & Messner, M.A. (1997) Gender displays and men's power: The "new man" and the Mexican immigrant man. In Toward a new psychology of gender, ed. Gergen, M.M. & Davis, S.N., pp 503-520. New York: Routledge.

Hopkins, J. Campbell, S.B. & Marcus, M. (1986) The role of infant - related stressors in postpartum depression. Journal of Abnormal Psychology, 96, 237-241.

Hopkins, J. Marcus, M. & Campbell, S.B. (1984) Postpartum depression: A critical review. Psychology Bulletin, 95, 498-515.

Hosman, C.M.H. & Veltman, N.E. (1994) Prevention in Mental Health: Review of Effectiveness of Health Promotion and Health Education. Nijmegen Research Group on Prevention and Psychopathology, Department of Clinical Psychology and Personality, University of Nijmegen.

Houseknecht, S.K. (1979) Childlessness and marital adjustment. Journal of Marriage and the Family, May, 259-265.

Howell, D.C. (1987) Statistical Methods for Psychology, Second Edition. Boston: Duxbury Press.

Huffman, L.C. Lamour, M. Bryan, Y.E. & Pederson, F.A. (1990) Depressive symptomatology during pregnancy and the postpartum period: Is the Beck depression inventory applicable? Journal of Reproductive and Infant Psychology, 8, 87-97.

Huynh, H & Feldt, L.S. (1976) Estimates of the correction for degrees of freedom for sample data in the randomised block and split-plot designs. Journal of Educational Statistics, 1, 69-82.

Jabali, C.A. (1993) A feminist perspective on postnatal depression. Health Visitor, 66, (2), 59-60.

James, P.S. (1991) Effects of a communication training component added to an emotionally focussed couple's therapy. Journal of Marital and Family Therapy, 3, 262-275.

Jardine, L. (1998) Fortysomething fathers, the first generation to participate fully in bringing up their sons, are in crisis. What's more, it's happening in the best of families. The Observer Newspaper, Oct, 18, 28.

Jarrahi-Zadeh, A. Kane, F.J. Jr. Van de Castle, R.C. Lachenbruch, P.A. & Ewing, J.A. (1969) Emotional and cognitive changes in pregnancy and early puerperium. British Journal of Psychiatry, 115, 797-805.

Jenkins, R. & Uston, T.B. (1998) Preventing Mental Illness: Mental Health Promotion In Primary Care, Chicester: John Wiley & Sons Ltd.

Johnson, D.L. (1991) Primary prevention of behaviour problems in young children: The Huston Parent-Child Development Centre. In Fourteen Ounces of Prevention: A Casebook for Practitioners. ed. Price, R. Cowan, E.L. Lorion, R.P. & Ramos-McKay, J. pp 44-52. Washington DC: American Psychological Association.

Karacan, I. & Williams, R.L. (1970) Current advances in theory and practice relating to postpartum syndromes. Psychiatry in Medicine, 1, 307- 328.

Karnosh, L.J. & Hope, J.M. (1937) Puerperal psychoses and their sequelae. American Journal of Psychiatry, 94, 537-550.

Kaufman, P.N. & Deutsch, A.L. (1967) Group therapy for pregnant unwed adolescents in the prenatal clinic of a general hospital. International Journal of Group Psychotherapy, 17, 309-320.

Kelly, S. (1998) Parenting education survey. Royal College of Midwives Journal, 1, (1), 23-25.

Kimball, K.K. & McCabe, M.E. (1981) Should we have children? A decision-making group for couples. Personnel and Guidance Journal, 60, 153-156.

Klatskin, E.H. & Eron, L.D. (1970) Projective test content during pregnancy and postpartum adjustment. Psychosomatic Medicine, 32, 487-493.

Kolodny, R.L. & Reilly, W.V. (1972) Groupwork with today's unmarried mothers. Social Casework, Dec, 613-621.

Kuevi, V. Carson, R. Dixson, A.F. Evrard, D.M. Hall, J.M. Hole, D. Whitehead, S.A. Wilson, C.A. & Wise, J.C. (1983) Plasma amine and hormone changes in 'postpartum blues'. Clinical Endocrinology, 19, 39-46.

Kuhn, T.S. (1970) The Structure of Scientific Revolutions, Second Edition. Chicago: University of Chicago Press.

Kuipers, L. (1992) Needs of relatives of long-term psychiatric patients. In Measuring Mental Health Needs, ed. Thornicroft, G. Brewin, C.R. & Wing, J. pp 291-307. London: Gaskell.

Kumar, R. (1994) Postnatal mental illness: A transcultural perspective. Social Psychiarty and Psychiatric Epidemiology, 29, 250-264.

Kumar, R. & Robson, K.M. (1984) A prospective study of emotional disorders in childbearing women. British Journal of Psychiatry, 144, 35-47.

Kumar, R. Robson, K.M. & Smith, A.M.R. (1984) Development of a self-administered questionnaire to measure maternal adjustment and maternal attitudes during pregnancy and after delivery. Journal of Psychosomatic Research, 28, 43-51.

LaRossa, R. & LaRossa, M.M. (1981) Transition to Parenthood: How Infants Change Families, Beverly Hills, CA: Sage Publications.

Lee, C. (1997) Social Context, depression and the transition to motherhood. British Journal of Health Psychology, 2, 93-108.

LeMasters, E.E. (1957) Parenthood as crisis. Marriage and Family Living, 19, 352-355.

Levinson, D.J. (1986) A conception of adult development. American Psychologist, 41, 3-13.

Levy-Shiff, R. (1994) Individual and contextual correlates of marital change across the transition to parenthood. Developmental Psychology, 30, (4), 591-601.

Lewinsohn, P.M. (1974) A behavioural approach to depression. In The Psychology of Depression: Contemporary Theory and Research, ed. Friedman, R.J. & Katz, M.M. pp 157-178. Washington, DC: V.H. Winston.

Lewis, J.M. (1988) The transition to parenthood: I. The rating of marital competence. Family Processes, 27, 149-165.

Lewis, S.N.C. & Cooper, C.L. (1988) The Transition to Parenthood in Dual-Earner Couples. Psychological Medicine, 18, 477-486.

Lewis, R.A. & Spanier, G.B. (1979) Theorising about the Quality and Stability of Marriage. In Contemporary Theories about the Family (Vol. 2), ed. Burr, W.R. Hill, R. Nye, F.I. & Reiss, I.L. pp - . New York: The Free Press.

Ley, P. (1977) Psychological studies of doctor - patient communication. In Contributions of Medical Psychology Vol.1, ed. Rachman, S. pp 9-42. Oxford: Pergamon Press.

Livingood, A.B. Dean, P. & Smith, B.D. (1983) The depressed mother as a source of stimulation for her infant. Journal of Clinical Psychology, 39, 369-375.

Locke, H.J. & Wallace, K.M. (1959) Short marital-adjustment and prediction tests: Their reliability and validity. Marriage and Family Living, 21, 251-255.

Lovestone, S. & Kumar, R. (1993) Postnatal psychiatric illness: The impact on partners. British Journal of Psychiatry, 163, 210-216.

Lubin, B. (1965) Adjective check lists for measurement of depression. Archives of General Psychiatry, 12, 57-62.

Luckey, E.B. & Bain, J.K. (1970) Children: A factor in marital satisfaction. Journal of Marriage and the Family, Feb, 43-44.

Ludbrook, A. & Farrar, S. (1998) Health Promotion: An Evidence Based Future (?) Health Bulletin, 56, (6), 878-888.

MacDonald, G. & O'Hara, K. (1998) A map of mental health: some implications for practice. In Promoting Mental Health, pp 367-377.

Mackenzie, M. (1998) The experience of fatherhood: A preliminary Investigation, University of Glasgow, Unpublished Thesis.

Manly, P.C. McMahon, R.B. Bradley, C.F. & Davidson, P.O. (1982) Depressive attributional style and depression following childbirth. Journal of Abnormal Psychology, 91, 245-254.

Margison, F. (1982) The pathology of the mother-child relationship. In Motherhood and Mental Illness, ed. Brockington, I.F. & Kumar, R. pp 191-222. London: Academic Press.

Markman, H.J. (1984) The longitudinal study of couples' interactions: Implications for understanding and predicting the development of marital distress. In Marital Interaction: Analysis and Modification, ed. Hahlweg, K. & Jacobson, N. pp 253-281. New York, NY: The Guilford Press.

Markman, H.J. & Kadushin, F.S. (1986) Preventive effects of Lamaze training for first time parents: A short-term longitudinal study. Journal of Consulting and Clinical Psychology, 54, 872-874.

Markman, H.J. Renick, M.J. Floyd, F. Stanley, S.M. & Clements, M (1993) Preventing marital distress through effective communication and conflict management: A 4- and 5-year follow up. Journal of Consulting and Clinical Psychology, 61, 70–77.

Marks, M. & Lovestone, S. (1995) The role of the father in parental postnatal mental health. In British Journal of Psychology, 68, 157-168.

Marks, M.N. Wieck, A. Checkley, S. A. & Kumar, R. (1991) Life stress and post-partum psychosis: A preliminary report. British Journal of Psychiatry, 158, 45-49.

Martin, M.E. (1977) A maternity hospital study of psychiatric illness associated with childbirth. Irish Journal of Medical Science, 146, 239-244.

Mauthner, N. It's A Woman's Cry for Help: A Relational Perspective on Postnatal Depression. (In Press)

Mauthner, N. (1993) Towards a feminist understanding of postnatal depression: 1. Feminism and Psychology, 3, 350-355.

Mauthner, N. (1998) Re-assessing the importance and role of the marital relationship in postnatal depression: methodological and theoretical implications. Journal of Reproductive and Infant Psycholgy, 16, 157-175.

Mayman, R. Shiloh, S. Bar-Shira Maymon, B. Chen, M. & Bahary, C. (1992) The effectiveness of childbirth preparation courses: A cognitive perspective. Journal of Psychosomatic Obstetrical Gynaecology, 13, 21-36.

McHale, S.M. & Huston, T.L. (1985) The effect of the transition to parenthood on the marriage relationship. Journal of Family Issues, 6, 409-433.

McLeod, W.T. & Hanks, P. ed (1986) The New Collins Concise Dictionary of the English Language. Glasgow: Collins.

McWilliams, E. (1993) The association of perceived support with birthweights and obstretic complications: Piloting prospective identification and the effects of counselling. Journal of Reproductive and Infant Psychology, 11, 1-7.

Meares, R. Grimwade, J. & Wood, C. (1976) A possible relationship between anxiety in pregnancy and puerperal depression. Journal of Psychosomatic Research, 20, 605-610.

Mechanic, D. (1986) The role of social factors in health and well-being: The bio-psychosocial model from a social perspective. Integrative Psychiatry, 4, 2-11.

Meeker, C.A.H. (1984) A Preventative Intervention for Postpartum Depression in Primiparous Women. University of Kansas, Unpublished Manuscript.

Meltzer, E.S. & Kumar, R. (1985) Puerperal mental illness, clinical features and classification: A study of 142 mother-and-baby admissions. British Journal of Psychiatry, 147, 647-654.

Merikangas, R.R. (1982) Assortative mating for psychiatric disorders and psychological traits. Archives of General Psychiatry, 39, 1173-1180.

Miller, B.C. (1976) A multi-variate developmental model of marital satisfaction. Journal of Marriage and the Family ,38, 643-658.

Miller, B.C. & Sollie, D.L. (1980) Normal stresses during the transition to parenthood. Family Relations, 29, 459-465.

Mitchell, R. & Trickett, E. (1980) Task force report: Social networks as mediators of social support and an analysis of the effects and determinants of social networks. Community Mental Health Journal, 16, 27-44.
Moore, G. % Hatrick, S. (1999) Adult Health and Lifestyle Survey – 1998. Ayr: Ayrshire and Arran Health Board.

Money, M. (1997) Defining Mental Health - What do we Think we're Doing? In Positive Mental Health and its Promotion ed. Money, M. & Buckley, L. pp 13-15. Liverpool: Institute for Health, John Moores University.

Moss, P. Bolland, G. Foxman, R. & Owen, C. (1986) Marital relations during the transition to parenthood. Journal of Reproductive and Infant Psychology, 4, 57-67.

Mrazek, P.J. & Haggerty, R.J. (1994) Reducing Risk for Mental Disorders: Frontiers for Preventive Intervention Research. Washington, D.C.: National Academy Press.

Mueller, D.P. (1980) Social networks: a promising direction for research on the relationship of the social environment to psychiatric disorder. Social Science and Medicine, 14a, 147-161.

Murray, L. & Cartwright, W. (1993) The role of Obstetric factors in postpartum depression. Journal of Reproductive and Infant Psychology, 11, 215-219.

Myers-Walls, J.A. & Sudsberry, R.L. (1982) Parent education during the transition into parenthood. In Family Strengths 4: Positive Support Systems, ed. Stinnnett, N. DeFrain, J. King, K. Lingren, H. Rowe, G. VanZandt, S. & Williams, R. pp 55-70. Lincoln: University of Nebraska Press.

Naymen, J. & Pearson, E.S. (1933) On the problem of the most efficient tests of statistical hypotheses. Philosophic transactions of the Royal Society of London (Series A), 231, 289-337.

Neumann, G.L. (1976) Beyond Pregnancy and Childbirth: The Uses of Anticipatory Guidance in Preparing Couples for Postpartum Stress. University of Missouri. Unpublished Manuscript.

Nicolson, P. (1993) Motherhood and women's lives. In Thinking Feminist: Key Concepts in Women's Studies, ed. Richardson, D. & Robinson, V. pp 201-223. New York: Guilford Press.

Nicolson, P. (1998) Post-Natal Depression: Psychology Science and the Transition to Motherhood. London: Routledege.

Nilsson, A. (1970) Para-natal emotional adjustment: A prospective investigation of 165 women, Part 1. Acta Psychiatrica Scandinavica, 47, (220), 1-61.

Nilsson, A. & Almgren, P.E. (1970) Para-natal emotional adjustment: A prospective of 165 women, Part 2. Acta Psychiatrica Scandanavica, 47, (220), 62-141.

Noller, P. & Callan, V.J. (1988) Marital Role Inventory. Queensland, Australia: Department of Psychology.

Nott, P.N. (1982) Psychiatric illness following childbirth in Southampton: A case register study. Psychological Medicine, 12, 557-561.

Nott, P.N. Franklin, M. Armitage, C. & Gelder, M.G. (1976) Hormonal change and mood in the pueperium. British Journal of Psychiatry, 128, 279-283.

Oakley, A. (1980) Women Confined - Towards a Sociology of Childbirth. Oxford: Martin Robertson.

Office of Population Census Statistics (1980) Classification of occupations and coding index. London: HMSO.

Office of Population Census Statistics (1991) Birth Statistics, VS2, 1990. London: HMSO.

O'Hara, M.W (1986) Social support, life events, and depression during pregnancy and the puerperium. Archives of General Psychiatry, 43, 569-573.

O'Hara, M.W. Neunaber, D.J. & Zekoski, E.M. (1984) Prospective study of postpartum depression: Prevalence, course and predictive factors. Journal of Abnormal Psychology, 93, 158-171.

O'Hara, M.W. Rehm, L.P. & Campbell, S.B. (1982) Predicting depressive symptomatology: Cognitive-behavioural models and postpartum depression. Journal of Abnormal Psychology, 91, 457-461.

O'Hara, M.W. Rehm, L.P. & Campbell, S.B. (1983) Postpartum depression: A role for social network and life stress variables. Journal of Nervous and Mental Disease, 171, 336-341.

O'Hara, M. W. Schlechte, J.A. Lewis, D.A. & Varner, M. W. (1991) Controlled prospective study of mood disorders: Psychological, environmental and hormonal variables. Journal of Abnormal Psychology, 100, 63-73.

O'Hara, M.W. & Swain, A.M. (1996) Rates and risk of postpartum depression – a meta analysis. International Review of Psychiatry, 8, 37-54.

O'Hara, M.W. Varner, M.W. & Johnson, S.R. (1986) Assessing stressful life events associated with childbearing: the Peripartum Events Scale. Journal of Reproductive and Infant Psychology, 4, 84-98.

O'Hara, M.W. & Zekoski, E.M. (1988) Postpartum depression: A comprehensive review. In Motherhood and Mental Illness 2: Causes and Consequences, ed. Kumar, R. & Brockington, I.F. pp 17-63. London: John Wright Publishers.

O'Hara, M.W. Zekoski, E.M. Phillips, L.H. & Wright, E.J. (1990) Controlled prospective study of postpartum mood disorders: Comparison of childbearing and non-childbearing women. Journal of Abnormal Psychology, 99, 3-15.
Orford, J. (1992) Community psychology: Theory and Practice. Chichester: John Wiley & Sons.

Pariser, S.F. Nasrallah, A. & Gardner, D.K. (1997) Postpartum Mood Disorders: Clinical Perspectives. Journal of Women's Health, 6, (4), 421-343.

Parkes, C.M. (1971) Psycho-social transitions: A field for study. Social Sciences and Medicine, 5, 101-115.

Parr, M.A. (1994) An Enquiry into the Development of an Integrative Approach Towards Psychotherapy and Counselling for Men and Women in the Transition to Parenthood and Early Parent-Infant Relationships. Regent's College School of Psychotherapy and Counselling, London, England. Unpublished Masters Degree Thesis.

Paykel, E.W. (1979) Recent life events in the development of depressive disorders. In The Psychobiology of Depressive Disorders, ed. Depae, R. pp 245-262. New York: Academic Press.

Paykel, E.S. Emms, E.M. Fletcher, J. & Rasaby, E.S. (1980) Life events and social support in puerperal depression. British Journal of Psychiatry, 136, 339-346.

Pitt, B. (1968) A typical depression following childbirth. British Journal of Psychiatry, 114, 1325-1335.

Pitt, B. (1973) Maternity blues. British Journal of Psychiatry, 122, 431-433.

Playfair, H.R. & Gowers, J.I. (1981) Depression following childbirth - a search for predictive signs. Journal of the Royal College of General Practitioners, 31, 201-208.

Pop, V.J. Essed, G.G. de Geus, C.A. Van Son, M.M. & Komproe, I.H. (1993) Prevalence of postpartum depression or is it post-puerperium depression? Acta Obstetricia Et Gynecological Scandinavica, 72, (5), 354-358.

Potts, L. (1980) Considering parenthood: Group support for a critical life decision. American Journal of Orthopsychiatry, 50, 629-638.

Prochaska, J. & Coyle, J.R. (1979) Choosing parenthood: A needed family life education group. Social Casework, 60, 289-295.

Radloff, L.S. (1977) The CES-D Scale: a new self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Rahim, F.A. & Al-Sabiae, A. (1991) Puerperal psychosis in a teaching hospital in Saudi Arabia: Clinical profile and cross-cultural comparison. Acta Psychiatrica Scandinavica, 84, 508-511.

Rappaport, J. (1981) In praise of paradox: A social policy of empowerment over prevention. American Journal of Community Psychology, 9, 1-25.

Raskin, V.D. Richman, J.A. & Gaines, C. (1990) Patterns of depressive symptoms in expectant and new parents. American Journal of Psychiatry, 147, 658-660.

Redshaw, M.E . (1997) Mothers of babies requiring special care: Attitudes and experiences. Journal of Reproductive and Infant Psychology, 15, 109–120.

Reid, M. Lang, G. Prigg, S. Murray, G. & Glazener, C. A two centred randomised controlled trial of two forms of postnatal support (Interim Report). (Unpublished Manuscript).

Rehm, L.P. (1978) The assessment of depression in therapy outcome research: A review of instruments and recommendations for an assessment battery. A report to the Psychotherapy and Behavioural Intervention Section, Clinical Research Branch, National Institute of Mental Health.

Renick, M.J. Blumberg, S.L. & Markman, H.J. (1992) The Prevention and Relationship Enhancement Program (PREP): An empirically based preventive intervention programme for couples. Family Relations, 41, 141–147.

Renne, K.S. (1970) Correlates of dissatisfaction in marriage. Journal of Marriage and the Family, 32, 54-66.

Rettersol, N. (1968) Paranoid psychoses associated with impending or newly established fatherhood. Acta Psychiatria Scandinavica, 44, 51-61.

Robin, A.A. (1962) The psychological changes of normal parturition. Psychology Quarterly, 36, 129-150.

Robson, C (1993) Real World Research: A Resource for Social Scientists and Practitioner-Researchers. Oxford: Blackwell.

Rollins, B.C. Cannon, K.L. (1974) Marital satisfaction over the family life cycle: A re-evaluation. Journal of Marriage and the Family, May, 271-282.

Rollins, B.C. & Feldman, H. (1970) Marital satisfaction over the family life cycle. Journal of Marriage and the Family, 26, 20-28.

Romito, P. (1990) Postpartum Depression and the Experience of Motherhood. Acta Obstericia Et Gynecologica Scandinavica, 69, 1-37.

Ross, M.K. (1995) Promoting the transition to parenthood. In Promotion of Mental Health – Vol.4, 1994, ed. Trent, D.R. & Reed, C. pp 273-282. England: Ashgate Publishing Limited.

Ross, M.K. (1998) Ounces of prevention and pounds of cure: issues in the promotion of mental health. The Bulletin, 26, 10-17.

Ross, M.K. & Stark, C. (1996) Taking steps: Putting mental health promotion on the agenda. Promotion of Mental Health – Vol.5, 1995. ed. Trent, D.R. & Reed, C. pp 331-339. England: Ashgate Publishing Limited.

Ross, M.K. & Stark, C. (1998) Promoting Mental Health: Symposium of the Ayrshire International Mental Health Promotion Conference (1997). Ayrshire: Organising Committee of the Ayrshire International Mental Health Promotion Committee.

Royal College of Midwives (1998) New Perspectives in Parenting Education: Report from the RCM Trust Parenting Education Consensus Conference. London: RCM.

Ruble, D.N. Hackel, L.S. Fleming, A.S. & Stangor, C. (1988) Changes in the marital relationship during the transition to first time motherhood: Effects of violated expectations concerning division of household labour. Journal of Personality and Social Psychology, 55, 78-87.

Russell, C.S. (1974) Transition to parenthood: Problems and gratifications. Journal of Marriage and the Family, 36, 294-301.

Ryan, L. & Sharpe, R. (1975) A comprehensive service programme for school-age pregnant girls. In The Teenage Pregnant Girl, ed. Zackler, J. & Brandstadt, W. pp - . Sprigfield/Illinois: Charles C Thomas.

Ryder, R.G. (1973) Longitudinal data relating to marriage satisfaction and having a child. Journal of Marriage and the Family, 35, 604-606.

Ryle, A (1961) The psychological disturbances associated with 345 pregnancies in 137 women. Journal of Mental Science, 107, 279-286.

Sanchez, L & Thomson, E. (1997) Becoming Mothers and Fathers: Parenthood, Gender and the Division of Labour. Gender and Society, 11, (6), 747-772.

Schopf, J. & Rust, B. (1994) Follow-up and family study of postpartum psychoses: 1. Overview. European Archives of Psychiatry and Clinical Neuroscience, 244, 101-111.

Schuchter, S.R. & Zisook, S. (1993) The course of normal grief. In Handbook of Bereavement, ed. Stroebe, M.S. Stroebe, W. & Hansson, R.O., pp 23-44. Cambridge University: Press.

Scottish Office Department of Health (1998) Working Together for a Healthier Scotland.

Seeley, S. Murray, L. and Cooper, P.J. (1996) The outcomes for mothers and babies of health visitor intervetion. Health Visitor, 69, 135-138.

Shapiro, S. & Nass, J. (1986) Postpartum psychosis in the male. Psychopathology, 19, 138-142.

Shereshefsky, P.M. & Yarrow, L.J. ed. (1974) Psychological Aspects of a First Pregnancy and Early Postnatal Adaptation. New York: Raven Press.

Sherrard, C. (1998) Social dimensions of research. The Psychologist, 11, 486-487.

Shure, M.B. & Spivack, G. (1982) Inter-personal problem-solving in young children: A cognitive approach to prevention. American Journal of Community Psychology, 10, 341-356.

Silverman, P.R. (1988) Widow-to-widow: A mutual help programme for the widowed. In Fourteen Ounces of Prevention: A Casebook for Practitioners, ed. Price, R. Cowen, E. Lorion, R. & Ramos-McKay, J. pp 176-186. Washington DC: American Psychological Association.

Slaughter, D.T. (1983) Early intervention and its effects on maternal and child development. Monographs of the Society for Research in Child Development, 48, 1-83.

Smith, J. (1992) Pregnancy and the transition to Motherhood. In The Psychology of Women's Health and Health Care, ed. Nicolson & Ussler J. London: MacMillan.

Spanier, G.B. (1976) Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. Journal of Marriage and the Family, 38, 15-25.

Spanier, G.B. Lewis, R.A. & Cole, C.L. (1975) Marital adjustment over the family life cycle: The issue of curvilinearity. Journal of Marriage and the Family, May, 263-275.

Spielberger, C.D. Gorsuch, R.L. & Lushene, R.E. (1970) STAI Manual for the State-Trait Anxiety Inventory. Palo Alto, CA: Consulting Psychologists Press, Inc.

Spitzer, R.L. Endicott, J. & Robins, E. (1978) Research diagnosis criteria: Rationale and reliability. Archives of General Psychiatry, 36, 773-782.

Stafford, R. Bachman, E. & di Bona, P. (1977) The division of labour among cohabiting and married couples. Journal of Marriage and the Family, 39, 43-57.

Stein, A. Gath, D.H. Butcher, J. Bond, A. Day, A & Cooper, P.J. (1991) The relationship between post-natal depression and mother child interaction. British Journal of Psychiatry, 158, 46-52.

Steiner, M. (1979) Psychobiology of mental disorders associated with childbirth. Acta Psychiatrica Scandanavica, 60, 449-464.

Stern, G. & Kruckman, L. (1983) Multi-disciplinary perspectives on postpartum depression: An anthropological critique. Social Science Medicine, 17, 1027-1041.

Stjernquist, K. (1996) The birth of an extremely low birth weight infant (EBLW) <901g: Impact on the family after 1 and 4 years. Journal of Reproductive and Infant Psychology, 14, 243–264.

Strayhorn, J.M. & Weidman, C.S. (1991) Follow-up one year after parent -child interaction training: Effects on behaviour of pre-school children. Journal of American Academy of Child and Adolescent Psychiatry, 30, 138-143.

Surtees, P.G. & Miller, P.M. (1990) The Interval General Health Questionnaire. British Journal of Psychiatry, 157, 686-693.

Tannahill, A. (1985) 'What is health promotion?' Health Education Journal, 44, 167-168.

Terry, D.J. McHugh, T.A. & Noller, P. (1991) Role dissatisfaction and the decline in marital quality across the transition to parenthood. Australian Journal of Psychology, 43, 129-132.

Tilford, S. Delanay, F. & Vogels, M. (1997) Effectiveness of Mental Health Promotion Interventions: A Review. London: Health Education Authority.

Tod, E. D. M. (1964) Puerperal depression: A prospective epidemiological study. Lancet, 2, 1264-1266.

Tomlinson, P.S. (1987) Spousal differences in marital satisfaction during the transition to parenthood. Nursing Research, 36, 239-243.

Treadway, C.R. Kane, F.J. Jarrahi-Zadeh, A. & Lipton, M.A. (1969) A psychoendocrine study of pregnancy and puerperium. American Journal of Psychiatry, 125, 1380-1386.

Trent, D. (1997) A concept of mental health. In Positive Mental Health and its Promotion ed. Money, M. & Buckley, L. pp 18-21. Liverpool: Institute for Health, John Moores University.

Trickett, E.J. Dahiyat, C. & Selby, P. (in press) Primary Prevention in Mental Health: An Annotated Bibliography. Rockville, MD: Department of Health and Human Services.

Tudor, K. (1996) Mental Health Promotion: Paradigms and Practice. London: Routledge.

Ussher, J. M. (1989) The Psychology of the Female Body. London: Routledge.

Vincent, J.P. Cook-Messerly, N. & Linzy, M. (1980) A social learning analysis of couples during the second post-natal month. American Journal of Family Therapy, 8, 49-53.

Wainwright, W.H. (1966) Fatherhood as a precipitant of mental illness. American Journal of Psychiatry, 123, 40-44.

Waldron, H. & Routh, D.K. (1981) The effect of the first child on the marital relationship. Journal of Marriage and the Family, Nov, 785-788.

Wallace, L.M. (1984) Psychological preparation as a method of reducing the stress of surgery. Journal of Human Stress, Summer, 62-77.

Wallace, L.M. (1986) Informed consent to elective surgery: The 'therapeutic' value? Social Science Medicine, 22, 29-33.

Watson, J.P. Elliott, S.A. Rugg, A.J. & Brough, D. I. (1984) Psychiatric disorder in pregnancy and the first postnatal year. British Journal of Psychiatry, 144, 453-462.

Weiner, B.J. (1970) Statistical Principles in Experimental Design. New York: McGraw Hill.

Whiffen, V.E. (1991) The comparison of postpartum with non-postpartum depression: A rose by any other name. Journal of Psychiatry and Neuroscience, 16, 160-165.

Whiffen, V.E. (1992) Is postpartum depression a distinct diagnosis? Clinical Psychological Review, 12, 485-508.

Whiffen, V.E. & Gotlib, I.H. (1993) Comparison of postpartum and non-postpartum depression: Clinical presentation, psychiatric history, and psychosocial functioning. Journal of Consulting and Clinical Psychology, 61, 485-494.

White, J. (1998) "Stresspac": Three-year follow-up of a controlled trial of a self-help package for the anxiety disorders. Behavioural and Cognitive Therapy, 26 133-141

White, L.K. & Booth, A. (1985) The transition to parenthood and marital quality. Journal of Family Issues, 6, 435-449.

White, J & Keenan, M. (1990) "Stress Control". A pilot study of large group therapy for Generalised Anxiety Disorder. Behavioural Psychotherapy, 18, 143-146.

White, J. Keenan, M. & Brooks, N. (1992) Stress Control: A controlled comparative investigation of large group therapy for Generalised Anxiety Disorder. Behavioural Psychotherapy, 20, 97-114.

Windridge, K.C. & Berryman, J.C. (1996) Maternal adjustment and maternal attitudes during pregnancy and early motherhood in women 35 and over. Journal of Reproductive and Infant Psychology, 14, 45-55.

Wing, J.K. Cooper, J.E. & Sartorious, N. (1974) The Measurement and Classification of Psychiatric Symptoms. Cambridge: Cambridge University Press.

Wolkind, S. (1981) Fathers. In Pregnancy: A Psychological and Social Study, ed. Wolkind, S. & Zajicek, E. pp 131-146. London: Academic Press Inc. Ltd.

World Bank (1993) World Bank Development Report: Investing in Health. Oxford: Oxford University Press.

World Health organisation (1946) Constitution. WHO: New York.

World Health Organisation (1975) International Classification of Diseases: Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Nineth Edition. Switzerland: WHO.

World Health Organisation (1977) International Classification of Diseases: Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, Tenth Edition. Switzerland: WHO.

Worthington, E.L. & Buston, B.G. (1986) The marriage relationship during the transition to parenthood: A review and a model. Journal of Family Issues, 7, 443-473.

Wright, P.J. Hengeler, S.W. & Craig, L. (1986) Problems in paradise?: A longitudinal examination of the transition to parenthood. Journal of Applied Developmental Psychology, 7, 277-291.

Yalom, I.D. Lunde, D.T. Moos, R.H. & Hamburg, D.A. (1968) "Postpartum blues" syndrome: A description and related variables. Archives of General Psychiatry, 18, 16-27.

York, R. (1990) Pattern of postpartum blues. Journal of Reproductive and Infant Psychology, 8, 67-73.

Zajicek, E. & Wolkind, S. (1978) Emotional difficulties in married women during and after the first pregnancy. British Journal of Medical Psychiatry, 51, 379-385.

Zigmond, A.S. & Snaith, R.P (1983) The Hospital Anxiety and Depression Scale. Acta Pschiatrica Scandanavia, 67, 361-370.